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ABSTRACT

This study was conducted to identify and review research studies related to career guidance effects, to categorize and synthesize those findings, and to make recommendations for future practice, research, and policy. Studies selected for the review were conducted since 1970, concerned grades 9 through 14, had a sample population of 25 or more, were set in an educational agency or community service organization, and were empirical. These studies were identified through telephone contacts with career guidance experts, a computer search of the literature, letters to state departments of education, convention programs, journals, congressional hearings, and other sources. Review of the studies showed that they could be organized into five major categories according to career guidance outcomes: (1) improved school involvement and performance (41 studies); (2) personal and interpersonal working skills (30 studies); (3) preparation for careers (14 studies); (4) career planning skills (34 studies); and (5) career awareness and exploration (44 studies). The majority of the studies reported positive outcomes as a result of various methods of career guidance intervention. As a result of the study, numerous recommendations were made regarding state and federal policy, practices, and research in the field of career guidance. (KC)

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ENHANCING CAREER DEVELOPMENT: RECOMMENDATIONS FOR ACTION

A Review of Empirical Studies of the Effects of Career Guidance

Robert E. Campbell
Janie B. Connell
Karen Kimmel Boyle
Robert D. Bhaerman

The National Center for Research
in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

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FOREWORD

Enhancing Career Development: Recommendations for Action, A Review of Empirical Studies of the Effects of Career Guidance has been prepared in response to our long-standing need to provide effective career guidance services in schools at all levels--elementary, secondary, and postsecondary. Recent national opinion polls have substantiated this need but also have raised questions as to the effectiveness of these services. Despite numerous improvement efforts, little attempt has been made to bring together the diverse findings in this area. This report attempts to do precisely that; that is, it attempts to synthesize the findings under five broad themes: (1) improved school involvement and performance, (2) personal and interpersonal work skills, (3) preparation for careers, (4) career planning skills, and (5) career awareness and exploration. The synthesis will help provide some of the answers to how effective career guidance interventions have been. While all of the questions will certainly not be answered, we will gain some common understandings with which to pursue further critical research, development, and implementation efforts.

This synthesis is intended for several audiences: program planners at the local, state, and federal levels; administrators of career guidance programs; and counselor educators, researchers, and practitioners at all levels. It will provide these groups with information for future program options, improved practice, and important research.

Recognition is due to the following guidance and counseling consultants for providing valuable direction in preparing the manuscript: Dr. John O. Crites, Kent State University; Dr. Norman C. Gysbers, the University of Missouri at Columbia; Dr. Arnold R. Spokane, the University of Maryland; and Dr. Donald E. Super, Teachers College, Columbia University. Dr. Spokane also served as a reviewer of the manuscript, as did Dr. Robert L. Smith, East Texas State University. Mr. Harry N. Drier who gave the project leadership as the Division Associate Director, and Dr. Donna M. Mertens of the National Center for Research in Vocational Education also served as project consultants. Dr. Richard J. Miguel and Mr. Fred Williams of the National Center staff provided helpful reviews. We are also grateful to the following National Center staff who prepared the review: Dr. Robert E. Campbell, Ms. Janie B. Connell, Ms. Karen Kimmel Boyle, and Dr. Robert D. Bhaerman. Typing and word processing of the manuscript were provided by Regenia Castle and Beverly Haynes. Editing was provided by C.R. Faddis of Field Services.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

One of the goals of this country's public schools is to provide career guidance programs and services to the students they serve. Over the last decade, federal, state, and local governments have made substantial investments to improve those programs and services, but a question has arisen regarding the effects of career guidance on the students. This study was conducted to identify and review research studies related to career guidance effects, to categorize and synthesize those findings, and to make recommendations for future practice, research, and policy. In addition, findings of a number of major previous reviews also were utilized.

The research studies that were reviewed had to meet the following criteria: (1) the study was conducted since 1970, (2) the population of the study was in grades 9-14, (3) the size of the study sample was twenty-five or more, (4) the setting for the study was an educational agency or community service organization, and (5) the study was empirical. Sources used to identify resource studies were telephone contacts with career guidance experts, a computer search of the literature, letters to state departments of education, convention programs, directories describing projects, professional journals, and testimony prepared for Congressional hearings on legislation related to guidance and counseling.

After the studies were obtained, each was reviewed according to its objectives, interventions for implementing the objectives, setting, instruments used to measure the effect of the intervention, and major findings or outcomes.

A wide array of objectives were evident. The objectives were grouped into five broad outcome categories or themes. These were: (1) improved school involvement and performance, (2) personal and interpersonal work skills, (3) preparation for careers, (4) career planning skills, and (5) career awareness and exploration. A number of studies had multiple objectives that cut across several of the categories.

Similarly, the studies used a variety of interventions. Counseling activities included group and individual counseling, videotaped models, structured interaction, and follow-up. Classroom activities also were diverse. They included specific guidance curriculum, curriculum infusion, basic skills instruction, specific modules, programmed instruction, career simulations, and occupational briefs. Several computer-based activities also were utilized. Other interventions included job

and educational placement, seminars and workshops, experience-based career education, employer-based career education, cooperative education, and various career exploration techniques.

The majority of the studies were conducted at the secondary school level in both rural and large urban school districts, additional sites were junior high schools and middle schools, area vocational schools, correctional institutions, community and junior colleges, colleges and universities, and counseling centers located at universities.

Most of the population for the studies consisted of high school students from such diverse backgrounds as academic and nonacademic programs, gifted and talented programs, experience-based and nonexperience-based career education programs, and programs for handicapped and disadvantaged students. The population also included some school dropouts, as well as several junior high school and vocational center participants. Other groups studied were undergraduate college students, correctional institute inmates and pre-release training program participants, and Neighborhood Youth Corps members. Populations also included Black, rural, Native American, and Mexican-American youth.

In terms of the outcomes, the following summaries indicate the major findings of the empirical studies.

- Improved school involvement and performance

  A total of forty-one studies focused on one or more of the five dimensions of this theme. The majority of the studies reported gains in student behaviors. The gains were attributed primarily to interventions involving individualized student learning experiences such as Experience-Based Career Education, special classroom activities, career exploration, and counseling.

- Personal and interpersonal work skills

  A total of thirty studies dealt collectively with this multiple objective--nineteen with self-awareness, five with interpersonal and life skills, and six with work values. The overwhelming majority of studies in this outcome category reported positive effects, i.e., twenty-six out of the total of thirty. In summary, the various interventions utilized--particularly EBCE, career education, and career and vocational exploration--led to favorable results.

- Preparation for careers

  Fourteen studies focused on this theme. Twelve studies demonstrated positive gains. The gains were attributed to four types of interventions: (1) counseling, (2) classroom instruction, (3) EBCE, and (4) career exploration activities.

- Career planning skills

  In general, career guidance interventions seem to have a beneficial impact on acquiring career planning skills. Of the thirty-four studies reporting evidence on this theme, twenty-seven found a positive outcome. Although many different interventions were used to achieve the outcomes, two were mentioned in over half the studies--EBCE and counseling. Other interventions ranged from computer-based programs to classroom activities.

- Career awareness and exploration

  Forty-four studies reported data in this area. Of the total, thirty-one studies showed positive results in various aspects of this objective. The remaining thirteen indicated either no significant differences between the groups studied, mixed results, or minor differences. In terms of interventions that showed more positive effects, the following were most prevalent: career and vocational exploration, experienced-based career education, counseling activities, and career education activities.

In addition to these studies, previous reviews and reports of the effects of career guidance interventions were cited. One of the most comprehensive analyses during the early 1970s was Myers' review (1971) of research on education and vocational counseling. Myers reported that studies showed that counselors can influence certain activities that may lead to better decision making. Another major review was conducted by Herr (1982), who analyzed guidance and counseling's philosophical, empirical, and cost-benefit effects in order to draw implications for research, development, and policy. His report contained many findings in the categories cited in the current review (e.g., improved school involvement and performance, personal and interpersonal work skills, preparation for careers, and career planning skills). Since there has been considerable interaction among researchers in drawing upon a common research data base, several statements and Congressional testimony also drew primarily from Herr's review. The following conclusions and recommendations are based on all studies and previous reviews.

The following four conclusions were cited:

- o The preponderance of evidence suggests that career guidance interventions achieve their intended objectives if guidance personnel are given the opportunity to provide structured guidance interventions in a systematic, developmental sequence.

- o Career guidance has demonstrated its effectiveness in influencing the career development and adjustment of individuals in the five broad outcome areas.

- o Career guidance has been successful in assisting individuals representing a wide range of subpopulations and settings, such as in correctional institutions, vocational training centers, community colleges, and rehabilitation centers.

- o The number and variety of career interventions has greatly increased, giving researchers and practitioners a larger pool of treatments from which to draw. For example, due to significant progress in computer applications for career exploration and choice, there are several dozen models from which to choose.

A series of recommendations in three broad areas also were cited:

1. Regarding state and federal policy

   - o National, state, and local education and employment and training policies should be written to include the total comprehensive career guidance concept. The concept should be employed in all future employment and training and education legislation.

   - o National, state, and local employment and training and education policy statements should recognize and support the inclusion of career guidance programs and services as an integral and central strategy for economic development and revitalization.

   - o Federal career guidance leadership should be at least at the division level to insure that the leadership participates fully in policy determinations and has the appropriate level budget and staff to meet the expectations and mandates of national policy and legislation.

   - o Policy and legislative provisions should clearly indicate and provide for state career guidance leadership.

2. Regarding career guidance practice

- o Programs should be designed for the continuity of individual career development.
- o More emphasis should be placed on exploiting what activities work and on strengthening them to achieve optimum career guidance effects.
- o There is the need to establish a larger number of highly trained, institutionally supported and effective teams of guidance workers.
- o A comprehensive list of client competencies should be developed to provide program direction.
- o School and agency-based career guidance activities should be more closely integrated with private sector experiences for clients, whenever feasible.
- o Programs should not rely solely on a few traditional techniques to achieve their program goals.
- o Career guidance activities that are too general or ambiguous should be avoided.
- o Self-initiated, periodic evaluation of the degree to which career guidance programs are achieving their objectives should be conducted more frequently.
- o Counselor education programs should be competency-based in order to insure that counselors acquire the necessary skills to meet the full range of their clients' needs.
- o Career guidance personnel at the local level should be updated on new technology to increase program effectiveness.

3. Regarding research

- o There is a need for researchers to report more complete data.
- o A classification of outcomes should be developed and tested.
- o A classification of interventions should be developed and tested.

- Employment and training and education policies and legislation should contain provisions to improve and strengthen state and local efforts to collect, organize, and disseminate career and labor market information.

- National, state, and local policy and legislation should support a wide range of updating activities for guidance personnel.

- National, state, and local policy and legislation should provide for a nationally coordinated research and development effort for career guidance programs and services.

- To insure that career guidance programs are well organized and systematic, annual state planning should indicate how programs are to be implemented and evaluated.

- Comparative studies are needed of intervention techniques for the same problem.

- Research is needed on differential interventions by age.

- Research is needed on interventions specific to varying populations.

- A substantial comparative study of comprehensive approaches is needed.

- Cost-benefit studies are needed.

- Research is needed on the optimum mix of public and private sector services.

- More research is needed to determine what kinds of career guidance intervention activities do not work.

- Research to enable more careful diagnosis of client needs in the design of interventions is needed.

CHAPTER 1

BACKGROUND AND OBJECTIVES

Background

A major goal of this country's public schools is to provide career development experiences to the students they serve. National opinion polls have verified this goal; however, they also have raised questions as to the quality of these experiences--that is, are they effective in achieving career guidance goals?

Over the last decade, federal, state, and local governments have made substantial investments to improve career guidance programs and services. These investments have included funding projects that have generated materials on how to integrate career development concepts systematically into the activities of the schools. The materials address such topics as: (1) designing a career guidance program, (2) the goals and objectives of a career guidance program, (3) establishing a career resource center, (4) the use of a computer-based guidance system, (5) collaboration of the school and community on career guidance issues, (6) the relationship of the counselor and others in the school, and (7) the influence of parents and others on a student's career development.

Despite the improvement efforts, considerable doubt still exists as to the effects of career guidance. In this era of limited budgets, school systems want to know the effects of various career guidance efforts prior to investing in them. Also, federal and state agencies can benefit from research information on guidance effects to assist them in setting policy and making future program investments. Currently, many policy and program decisions are based more on opinion and speculation than on reliable research.

Comprehensive examinations of the effects of career guidance efforts (i.e., student outcomes) are rare. There have been numerous evaluative studies on specific aspects of career guidance (e.g., career exploration and decision making), but these have not been synthesized to permit a total look at guidance effects.

Objectives

The purpose of this study was to determine the effects of career guidance programs and activities. The study had three major objectives:

1. To identify and synthesize findings from research studies that have addressed career guidance effects.

2. To identify and synthesize findings of previous reviews that have assessed the effects of career guidance.

3. To make recommendations for future practice, research, and policy.

Organization of the Report

Chapter 2 describes the methodology for the study (i.e., how studies were acquired, screened, reviewed, and classified). Chapter 3 reviews the findings of the studies grouped according to different variables, as follows: (1) studies with similar career guidance interventions or strategies, (2) studies with similar objectives, (3) studies with similar populations, and (4) a summary of previous reviews assessing the effects of career guidance. Chapter 4 contains the conclusions and recommendations as well as implications for future research and recommendations for program planning and policy formulation.

* * * * *

NOTE: The following terms were used in the study as the basis for defining the key concepts.

*Career Awareness. The inventory of knowledge, values, preferences, and self-concepts which an individual uses in the course of making career-related choices.

*Career Counseling. A one-to-one or small group relationship between a client and a counselor with the goal of helping the client(s) integrate and apply an understanding of self and the environment to make the most appropriate career decisions and adjustments.

*Career Education. An effort aimed at refocusing American education and the actions of the broader community in ways that will help individuals acquire and utilize the knowledge, skills, and attitudes necessary for each to make work a meaningful, productive, and satisfying part of his/her way of living.

*Career Exploration. One's involvement in trying out a variety of activities, roles, and situations in order to find out more about aptitude for or interest in an occupation or other career opportunities.

*Career Guidance. Those activities and programs which assist individuals to assimilate and integrate knowledge, experience, and appreciations related to--

- o Self-understanding, which includes a person's relationship to his/her own characteristics and perceptions, and his/her relationship to others and the environment
- o Understanding of the work of society and those factors that affect its constant change, including worker attitudes and discipline
- o Awareness of the part leisure time may play in a person's life
- o Understanding of the necessity for and the multitude of factors to be considered in career planning
- o Understanding of the information and skills necessary to achieve self-fulfillment in work and leisure
- o Learning and applying the career decision-making process

Career Guidance Effects. Career guidance effects are the observable behavioral outcomes resulting from a career guidance intervention or treatment intended to enhance an individual's career development.

Career Guidance Intervention. The strategy or treatment used to enhance an individual's career development.

*Computerized Guidance. The process by which a client becomes familiar with occupational and educational information through the expanded delivery system of a computer.

*Curriculum Infusion. The process of integrating career development objectives and experiences with other subject matter in the ongoing curriculum.

*Decision Making. A process designed to assist persons in making personally satisfying decisions, including these components: (1) exploration and clarification of personal values, (2) use of data about self and the environment, and (3) study of the decision process and strategies. The process includes these steps: (1) recognize the need for a decision, (2) explore alternative choices, (3) predict the probable outcomes of each choice, (4) assign personal values to each choice, (5) determine the cost of each choice, (6) make a decision, (7) implement the decision, and (8) evaluate the outcomes of the decision.

Experiential Education Programs. A generic term that refers to planned educational experiences designed to enable learners to acquire skills, attitutdes, and knowledge for work and other life roles by participating in work settings. This term includes programs such as experience-based academic programs, cooperative vocational education programs, and career exploration programs.

*Self-Awareness. The process through which an individual differentiates self from environment and others, recognizing that he/she is a unique individual.

Study Objectives. The objectives a research study sets for its clients.

[Definitions with asterisks were obtained from The National Vocational Guidance Association's Glossary of Career Guidance Terms (1982).]

CHAPTER 2

METHODOLOGY

This chapter describes (1) the procedures that were used to identify and assemble relevant studies and (2) the means by which the studies were categorized.

Selection Criteria

The first step was to establish criteria for screening the research studies. With few exceptions, the studies included in the report were selected according to the following criteria: (1) the study was conducted after 1970, (2) the population of the study was in grades 9-14, (3) the size of the sample was twenty-five or more, (4) the setting for the study was an educational agency or community service organization, and (5) the study was empirical.

Identification Process

The process of identifying relevant studies was extensive. The following is a brief description of the procedures used.

(1) Telephone contacts were made with sixteen national career guidance experts. The project's purpose and study selection criteria were explained to the experts and they were asked to identify potential studies.

(2) Mechanized Information Center (MIC) Dialog Computer Search resulted in 500 citations. The primary descriptions for the search were: career planning, career guidance, career development, career education, career choice, career counseling, career exploration, career awareness, employment counselor, and school guidance. These descriptions were combined with the following: evaluation, counseling effectiveness, program effectiveness, program validation, program costs, and cost effectiveness.

(3) Letters were sent to guidance supervisors, research coordinating unit supervisors, career education coordinators, vocational research and evaluation consultants, program development directors, occupational and career research development coordinators, and research consultants at the state departments of education in all states and territories. These people were requested to provide information on appropriate studies.

(4) Convention programs for the American Psychological Association and the American Personnel and Guidance Association were reviewed. Convention presentations that appeared to be relevant to this study were identified. Presenters were contacted to provide written information on their studies.

(5) Directories that contain information on educational research projects were reviewed and relevant research projects were identified. The directories were Educational Programs that Work (Far West Laboratory for Educational Research and Development, San Francisco, 1975 to 1981), a resource of exemplary educational programs developed by local school districts and approved by the Joint Dissemination Review Panel; the CEDaR Projects Catalog; Current Research Projects (1978-81), a directory of projects funded through the U.S. Office of Vocational and Adult Education; and Building Comprehensive Career Guidance Programs for Secondary Schools; Handbook of Programs, Practices, and Models.

(6) Four national longitudinal studies were analyzed to determine if they had information that applied to this study.

(7) Back issues (since 1970) of professional guidance journals that provide research findings also were reviewed. The journals were: The Vocational Guidance Quarterly, Measurement and Evaluation in Guidance, The Journal of Vocational Behavior, The Journal of Counseling Psychology, and The Counseling Psychologist.

(8) Special papers and testimony for Congressional hearings were analyzed for references to additional studies.

Even with this identification process, omissions of relevant studies may have occurred because of inability to locate them, misclassification, failure of agencies to send requested unpublished reports, or error in judgements of pertinent criteria. Therefore, no claim is made that this study reviews and synthesizes all relevant studies.

Conceptual Framework

The conceptual framework guiding the data collection and analysis for this study is illustrated in Figure 1. The effects of guidance appear as various outcomes which result from a variety of diverse interventions.

Ten broad types of career guidance intervention techniques were identified. They are counseling, classroom activities, computer-based programs, placement services, seminars and

workshops, experience based career education, cooperative education, employer-based career education, alternative career education, and career and vocational exploration techniques. For most types of interventions, a large variety of techniques appear within each category.

The first type of intervention is counseling. Various types of counseling strategies are included within this technique, including group activities, videotaped models, structured interaction, individual activities, and follow-up activities.

The second type of intervention is classroom activities. This broad group contains the following kinds of activities: career guidance curriculum, career guidance infusion, curriculum models for reducing sex bias and sex role stereotyping, basic skills instruction, guest speakers, films, occupational survival skills training modules, academic instruction, programmed instruction, career logs, career simulation, occupational briefs, and study skills.

The third type or category of intervention is computer-based programs. The category includes the use of the computer to assist an individual in obtaining and using occupational and educational information.

The fourth type, placement services, refer to procedures for assisting student in obtaining jobs.

The fifth type of intervention used seminars or workshops as a means for focusing on a specific career guidance objective such as assisting a client to acquire satisfactory work habits.

The next three categories of interventions (experience-based career education, employer-based career education, and cooperative education) refers to planned educational experiences designed to enable learners to acquire skills, attitudes, and knowledge for work an other life roles by participating in work settings and cooperative education.

The ninth type of intervention, alternative career education, refers to a specially constructed combination of career related instruction in a variety of settings. The intent of the education is to provide the student with an individualized program of instruction.

The tenth category of intervention is career and vocational exploration activities which include a wide range of techniques intended to facilitate the process of identifying and choosing careers.

This structure was used as a ruler in developing the inventory of studies to be aggregated. That is, no study was included which did not (1) utilize at least one of the ten types of interventions listed in Figure 1 and (2) collect evidence relative to at least one of the outcomes. Primary syntheses were prepared by outcome area, e.g., improved school performance, personal and interpersonal work skills. Secondary analyses examined interventions used in achieving those outcomes.

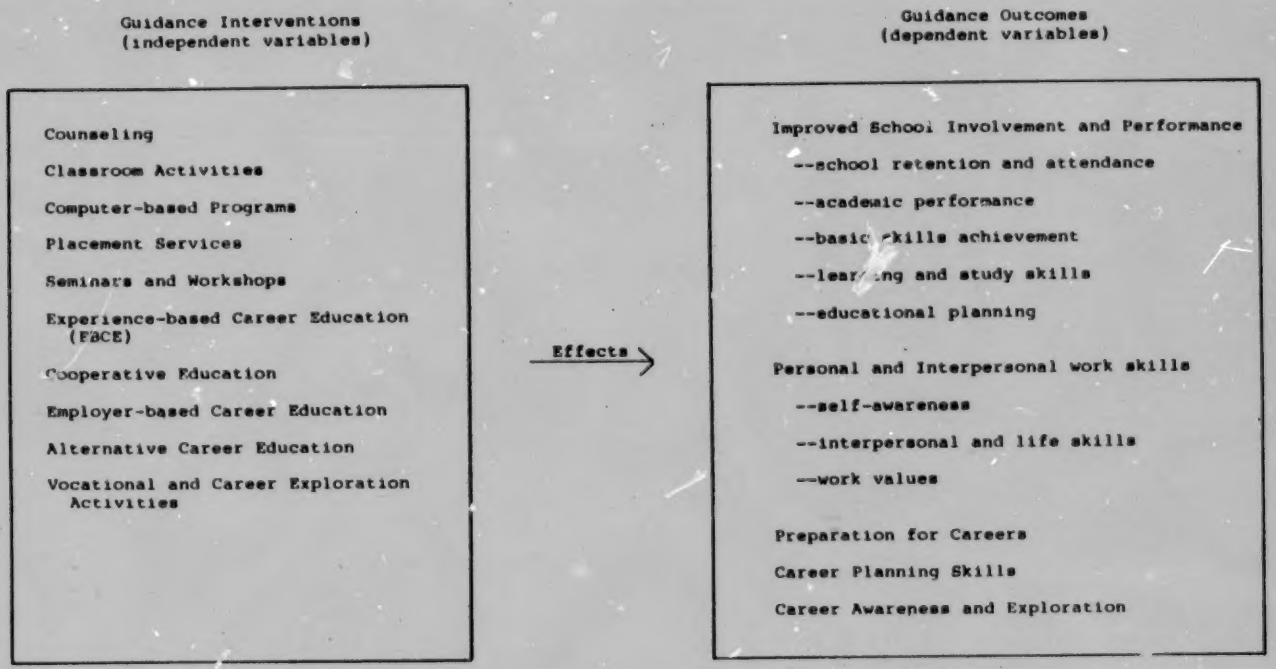

Figure 1. Conceptual Framework Undergirding the Study

CHAPTER 3

A REVIEW OF THE FINDINGS OF THE STUDIES

This chapter reviews the findings of the studies. It is divided into two parts. The first part reviews the findings of more than 200 studies specifically identified for this report. The second part summarizes 14 additional supporting reports that previously reviewed the outcomes of career guidance interventions. The total review represents an estimated 500 studies.

The review for part one is based on information contained in Appendices A, B, and C. Each appendix organizes the same studies differently in order to examine the significant variables of the studies (by populations, interventions, and outcomes). Appendix A classifies studies to depict major career guidance objectives-outcomes themes; Appendix B classifies them by treatment interventions; and Appendix C classifies them by target populations. Each class of information will be discussed below.

Career Guidance Themes

Appendix A groups the studies by five career guidance themes. Each theme represents a cluster of career guidance objectives that reflect a similar purpose for their clients. For example, the theme of improved school involvement and performance reflects a group of objectives intended to help clients become more involved in such academic performance as increasing school participation, basic skills, and educational planning. The themes were derived by a panel of three career guidance experts, who reviewed and categorized each study objective for their similar purposes. The five themes and their subtopics are as follows:

- Improved School Involvement and Performance

  --School retention
  --School attendance
  --School participation
  --Academic performance
  --Learning/study skills
  --Basic skills
  --Educational planning

- Personal and Interpersonal Work Skills

  --Self-awareness
  --Interpersonal skills
  --Life skills or life role competencies
  --Work values
  --Out-of-school behavior

- Preparation for Careers

  --Vocational skills or work-related skills
  --Career implementation skills and/or
    employability skills

- Career Planning Skills

- Career Awareness and Exploration

All of the relevant studies for each theme were listed in figure 1 under that theme. Each study describes client objectives, intervention/strategy, settings, populations, outcomes, author, and date. The highlights of the findings of each of the five themes are summarized next.

Improved School Involvement and Performance

This theme identified various methods for motivating students to remain in school, to attend school on a more frequent basis, or to participate in school-related activities.

Forty-three studies dealt with the theme of improved school involvement or performance as all or part of their career guidance objectives. Highlights of the findings of some of these studies are as follows:

- Studies of potential ninth-grade dropouts found that those who received individual and group counseling, took field trips to employment sites, heard guest speakers, and saw films experienced a significant decrease in dropout rate. (Campbell 1981)

- A study of tenth- and eleventh-grade Indian youth who (1) participated in vocational, personal, and school counseling (2) attended seminars and job exploration field trips, and (3) heard guest speakers, experienced a significant decrease in dropout rate. (Career Guidance for Indian Youth 1976)

- Absenteeism and dropout rates were reduced for students in grades 9-12 through an alternative learning project--an individual basic skills program, a college preparatory course, community-wide career exploration activities, a broad arts program, and through counseling. (Kenyon 1974)

- The use of the General Aptitude Test Battery (GATB) as a part of a preselection procedure together with vocational counseling as a preparatory procedure for admittance into vocational programs proved to be a significant factor in male vocational center trainees' completion rate in their chosen vocational programs. (Serednesky, Cahill, and Engelhart 1974)

- Classroom guidance, case conferences, peer counseling, parent information, counseling groups for parents, community group cooperation, self-esteem groups, teacher support, and attendance monitoring, provided potential dropouts in grades 9-12 with the impetus to stay in school, earn more credits, reduce unexcused absences, increase participation in school activities, set and attain their own learning objectives, improve their reading skills, and raise their self-esteem. (Stoker 1979)

- Experience-based career education (EBCE) with twelfth-grade students enhanced their scores on the five Comprehensive Test of Basic Skills (CTBS) subtest-posttests when considered simultaneously. (Carey and Weber 1979)

- Classroom experiences in an inner-city New York City setting with tenth-grade students enrolled in a general education curriculum served to improve significantly their attendance and punctuality, and to increase school and self-initiated exploratory behavior. (Hamdani 1977)

- Another EBCE program conducted with high school students helped to improve their attitudes toward work, their recognition of the importance of learning marketable skills, and their work habits as well as school attendance. (Handler et al. 1978)

- Educationally disadvantaged students who participated in an integrated program of vocational, compensatory, and career education experienced significant changes in achievement levels during the project. (Holmes 1979)

- Another EBCE program produced improvements in self-attitudes, attitudes toward school, attitudes toward others, attitudes toward education in general, and

increases in academic achievement. Conecuh County Experience-Based Career Education 1977)

- An EBCE program for high school juniors and seniors that stressed career exploration activities, career counseling, and academic instruction fostered some significant and some nonsignificant gains for students in all test areas and revealed that academic achievement was not hindered by EBCE participation. (Experience-Based Career Education Project 1978)

- Students in grades 7, 9, and 11 who participated in an incremental career education project and who had achievement test scores that were below norm improved to be at or above the norms in later grades. (Omvig 1979)

- High school students participating in EBCE showed effectiveness in achieving growth in basic skills, career awareness, interpersonal skills, and enhanced motivation to learn. (Peterson 1975)

- Gifted and talented high school juniors and seniors who participated in a public service administration internship program in career education revealed some inconsistencies in attitudes about the relevancy of skills they learned in school to their functioning in the world of work. (Public Service Administration Internship Program in Career Education 1978)

- Twelfth-grade EBCE students made significant gains in academic subjects, career decision-making and employment-seeking skills, and motivation toward school. (Stead and Hartnett 1978)

- College students who experienced a combination of group counseling, study skills instruction, and individual internal/external locus of control counseling received significantly higher grade point averages than did comparison groups. (Whyte 1978)

- Evaluation results of an alternative high school program designed to improve attitudes toward learning revealed that participating students compared favorably with other high school students and that the greatest gains were in reading skills and in attitudes toward school. (Smith 1975)

- Ninth- and tenth-grade students who participated in the Career Education Plus program fully or partially attained improvement in oral communication, improved writing

skills, and improved quantitative skills. (Career Education: Planning, Learning, Understanding, and Succeeding (CE +) 1977)

- Puerto Rican high school students who participated in an EBCE program showed a greater gain over non-EBCE students in almost all academic areas tested. (Experience-Based Career Education Project 1982).

- Ninth- and tenth-grade students participating in an EBCE program did not show any increased mastery in all career skills, life skills, and basic skills, nor did they show any decrease. (Muse and Coombs 1977)

Theme Summary

--School retention and attendance. All nine studies demonstrated improvements in this area. The most frequent interventions employed to achieve improvements were individualized student learning experiences such as counseling and special classroom activities.

--Academic performance. Ten studies reported objectives to improve the academic performance of students. Six of the studies showed improvements--five through EBCE, and the sixth through counseling. Four that used EBCE did not demonstrate improvement.

--Learning-study skills. Eighteen studies reported objectives to help students acquire learning-study skills and develop positive attitudes toward school. Thirteen of the eighteen studies reported gains for these behaviors; however, the bulk of these gains were for positive attitudes toward school. Of the interventions demonstrating gains, ten used EBCE, two used classroom learning experiences, and one used counseling.

--Basic skills. Fifteen studies included the improvement of basic skills as part of their overall objectives for career guidance intervention. Eight of the fifteen studies demonstrated improvements in basic skills using EBCE, and classroom instruction. The remaining seven studies did not demonstrate improvements using similar interventions.

--Educational planning. All three studies demonstrated improvements in educational planning particularly as the

planning related to preparation for careers. Improvements were attributed to career exploration, career education, and counseling interventions.

Conclusion. A total of forty-one studies focused on one or more of the five dimensions of this theme. The majority of the studies reported gains in student behaviors. The gains were attributed primarily to interventions involving individualized student learning experiences such as EBCE, special clasroom activities, career exploration, and counseling.

Personal and Interpersonal Work Skills

The second theme, personal and interpersonal work skills, treats such topics as self-examination and recognition of one's work potential and job satisfaction, clarification of values, attitudes toward sex role stereotyping, and increased personal confidence and self-esteem. In addition, the theme includes personal and interpersonal work skills, life skills, the dignity of work, and positive out-of school behavior. Thirty studies related to this theme. General findings of the studies relating to this second theme are as follow:

- Significant differences were found between first-year male and female college students who participated in a curriculum model to reduce sex bias and sex role stereotyping. (Blimline 1976)

- Predominantly urban, black tenth-grade students who scored in excess of 20 percentile points below the national norm in basic skills achievement and who participated in a planned cluster of diverse career-focused activities received higher scores than did the comparison group on total Crites' Maturity Inventory competency scores. (Career Education Resource Center Program (CERCP) 1979)

- High school EBCE students demonstrated growth in basic skills, career awareness, and interpersonal skills. (Chatham 1975)

- Ninth- and tenth-grade students from an area vocational school (participating in a career exploration program) were better informed about career choice and demonstrated more positive attitudes about their abilities and chances for vocational advancement as compared to students from the control school and the general high school. (Cochran and Weis 1972)

- Community college students enrolled in a cooperative education program had mixed results. Those students who were placed in internship positions appeared to experience a greater impact regarding perceptions of themselves, whereas students in the classroom setting experienced a greater impact with regard to perceptions of preferred occupation. (Ducat 1980)

- Community-based career experiences, a career resource room, and an individualized course of instruction with community experiences for high school students enhanced their performance on a Career Maturity Index. Some evidence of appropriate attitude development also was seen. (Experience-Based Career Education 1978)

- Tenth-graders in an inner-city New York school who had about 100 hours of classroom experiences evidenced gains in career maturity that remained intact four months after treatment. (Hamdani 1977)

- EBCE high school students in Pennsylvania showed improved attitudes toward work, recognized the importance of learning marketable skills, improved their work habits, and had better school attendance. (Handler et al. 1978)

- A community-based career education program for high school students had a definite impact on the students' abilities to analyze conditions and requirements of occupations. However, little or no impact was realized regarding increased understanding of positive and negative rewards associated with various types of work. There was an increase in students' understanding of their own abilities. Little or no impact was found regarding the actual selection of jobs stereotyped for the opposite sex. (Highline's Vocational Exploratory and Preparatory Program 1978)

- For students in grades 9-12, an alternative learning project--including an individual basic skills program, a college preparatory course, community-wide career exploration activities, a broad arts program, and counseling--improved students' attitudes toward themselves and school in general. (Kenyon 1974)

- An intermediate career education course conducted with high school students that focused on perceptualization (self and environmental orientations), conceptualization (directional choice and adaptive behavior), and

generalization (accommodation, satisfaction, mastery) significantly improved students' knowledge of personal and interpersonal work skills. (Leton 1975)

- A vocational exploration group that was used with non-handicapped and physically impaired students to increase self-recognition of work potential and job satisfiers helped to induce changes in favor of a self-report of more options. Also, significant increases were found in aspirations that tend to reveal self-confidence and independence and in recognition of work potential. There were also increases in the number of work areas considered personally relevant. (Neely and Kosier 1977)

- When Project Discovery materials were used with students to increase their experience base and heighten awareness of the kind of work for which their abilities and interests suited them, the mean change on all scales of the Mature Assessment of Discovery Exploration increased as the group mean for packages explored increased. (Olive 1978)

- Self-appraisal, occupational information, goal selection, planning, and problem solving were areas in which students classified as low-achieving urban tenth-graders made significant gains after participating in coordinated activities in the Career Education Resource Center, the classroom, and the community. (Page 1980)

- Using a computer-based vocational exploration program, eleventh-grade males demonstrated increased accuracy about their intelligence but not about their interests after treatments that included feedback. Increases were largely due to changes in subjects who originally underestimated their intelligence. (Pilato and Myers 1973)

- Results from the Student Attitude Survey in the area of self-awareness, conducted as a part of a public service administration program in career education with gifted and talented students, revealed that second semester interns held basically positive attitudes about themselves and knew themselves well enough to at least begin to make logical career decisions. (Public Service Administration Internship Program in Career Education 1978)

- A short-term educational program for community/junior college females assisted women to enter nontraditional occupations by helping them to set career goals and to change stereotypical attitudes. Participants reported feeling less deterrence from potential barriers and having more control over career development. (Thomas et al. 1980)

- A career education program (Career Education: Planning, Learning, Understanding, and Succeeding) conducted with a ninth- and tenth-grade students did not reveal effectiveness in improving reading skills, development of self-knowledge, more positive attitudes toward work, or a higher level of career awareness. (Career Education: Planning, Learning, Understanding, and Succeeding 1977)

- Results of an ECBE program revealed that EBCE students showed improved attitudes toward work and recognized the importance of learning marketable skills, improved work habits, and school attendance. (Handler et al. 1978)

Theme Summary

--Self-awareness. Nineteen studies reported data on self-awareness. These studies noted increases in such related areas as attitudes, self-confidence, self-appraisal, and self-knowledge. These concepts also manifested themselves in a number of specific behavioral changes (e.g., more positive attitudes about abilities and changes for vocational advancement, less deterrence from potential barriers to women community/junior college students, greater recognition of work potential and options, and heightened awareness of the kinds of work for which abilities and interests are suited.)

Of the nineteen studies, seventeen (89 percent) showed positive results in various aspects of this objective. Five studies used experienced-based career education as an intervention strategy; five used career and vocational exploration; four used career education interventions. The other two studies which showed positive results used classroom activities and career education interventions; in these two instances, either no significant differences were found between the experimental and comparison groups on any of the criteria or the report of the findings were inconclusive.

In summary, studies that relied upon such interventions as career education--either experienced-based or school-based--and career and vocational exploration reported data on various dimensions of improved self-awareness.

--Interpersonal and life skills. Only five studies reported data in this area. Although this topic was not one of the major focuses, some positive data were reported regarding progress in students' ability to relate their personal interests and values to their career choices and in their relationships with adults. The primary improvements in this area dealt with enhanced motivation to learn and more positive attitudes toward schooling. Of the total, four out of five studies showed positive results in various aspects of this objective.

All five of the studies, interestingly, utilized variation of the experience-based career education (EBCE) model. With regard to the fifth study, although the students did not show any increased mastery in this area, neither did they show any decreases. In summary, EBCE was the only intervention cited that resulted in improvements in this area.

--Work values. Six studies reported data in this area. The two most relevant outcomes were (1) an EBCE finding that showed improved attitudes toward work, the recognition of the importance of learning marketable skills, and improved work habits; and (2) the variables of amount of work experience, work plans, and educational plans were found to bear significant relationships to the attainment of occupational survival skills. Of the total number, five out of six studies showed positive results in various aspects of this objective. In these studies, three of the interventions dealt with career education activities; the other two were experienced-based career education model and a classroom activity (module). With regard to the sixth study--in which career education was the intervention--more positive attitudes toward work were not reported. In summary, career education was the most prelevant intervention cited that resulted in improvements in this area.

Conclusion. A total of thirty studies dealt collectively with this multiple objective--nineteen with self-awareness, five with interpersonal and life skills, and six with work values. Two studies (Chatham's and Comer's) appeared in more than one sub-group.

The overwhelming majority of studies in this outcome category reported positive effects, e.g., twenty-six out of the total of thirty (or 86.6 percent), seventeen out of nineteen in self-awareness, four out of five in interpersonal and life skills, and five out of six in work values. In summary, the various interventions utilized--particularly EBCE, career education, and career and vocational exploration--led to favorable results.

With regard to the interventions in the thirty studies, one-third (10) were experienced-based career education activities. The other two most prevelant ones were career education activities (7) and career and vocational exploration (5). In short, interventions which provided for "hands-on" experiences that went beyond the walls of the classroom are the most popular and, seemingly, the most useful devices for improving personal and interpersonal work skills.

Preparation for Careers

The third theme, preparation for careers, includes methods for improving the ability to locate, obtain, perform, and keep a job. Fourteen studies addressed some facet of this theme. Findings relating to preparation for careers are as follows:

- Ninth- and tenth-grade students who participated in Career Education: Planning, Learning, Understanding, Succeeding, satisfactorily completed projects and demonstrated competence and development of career knowledge and career exploration. (Career Education: Planning, Learning, Understanding, and Succeeding 1977)

- An ECBE program for high school students that was designed to improve the skills and knowledge necessary to choose, enter, advance in, and find satisfaction in adult roles succeeded in enhancing growth in basic skills, career awareness, interpersonal skills, and student motivation. (Chatham 1975)

- High school students who participated in an EBCE program reportedly achieved growth in preparation for career opportunities, communication skills, math, perceptions of environment, motivation to learn, and ability to solve problems, make decisions, and take action. (Experience-Based Career Education Project 1982)

- Some of the high school students and agency participants who used the Guidance Information System (GIS) reported that although the GIS is not designed to develop job-seeking or job-keeping skills, it aided them in these skills. (Ryan et al. 1980)

- With male inmates in a prerelease training program, both model exposure plus role playing and model exposure and role playing with video feedback yielded significantly greater results for improving job interview skills than did simply using model exposure alone. (Speas 1979)

- Twelfth-grade students in an experience-based career education program made significant gains in academic subjects as well as in career decision-making and employment-seeking skills. (Stead and Hartnett 1978)

- Ninth- and tenth-grade students in a program designed to supplement corresponding grade level components of the Ohio Development Program showed more career-related learning in developmental areas, especially cognitive learning. (McCauley and Rusling 1979)

- A Work Experience and Career Exploration Program (WECEP) used with junior high school and senior high school students identified as potential dropouts was significantly related to an increase in their measured vocational maturity. (Schmidt and Dykeman 1979)

- Of 179 senior dropout-prone Neighborhood Youth Corps students enrolled in a vocational exploration program in the private sector, 71.5 percent continued their employment, 9.5 percent continued their education, 4.5 percent joined the military, 10.6 percent did not work after graduation, and 2.8 percent got married. Sprengel and Tomey 1974)

Theme Summary

Fourteen studies focused on this theme. Twelve studies demonstrated positive gains. The gains were attributed to four types of interventions: (1) counseling, (2) classroom instruction, (3) EBCE, and (4) career exploration activities.

Career Planning Skills

The fourth theme, career planning skills, includes career decision making, goal setting, educational and vocational planning, goal selection, long-range and short-range planning, knowledge of resources for planning, increased realism of vocational choice, information seeking, vocational maturity, and career development. Thirty-four studies dealt with this area of

career guidance. Highlights of the findings of some of these studies are as follow:

- A positive relationship was found to exist between the use of group reinforcement counseling and career information seeking of male college freshmen and sophomores. (Aiken and Johnston 1973)

- Eleventh-grade females in an all-women's counseling group were better able to make career decisions than did women in a sexually mixed group. (Brenner and Gazda-Grace 1979)

- Tenth-grade students who participated in Business Industry-Training-Education (BITE) classes demonstrated 20 percent gains both in attitude and competency scores regarding career awareness, exploration, and decision making. (California State Department of Education 1978)

- The Career Education Resource Center Program (CERCP) assisted predominantly black tenth grade students who scored in excess of 20 percentile points below the national norm in basic skills achievement, and positively influencing their career-related competencies. (Career Education Resource Center Program 1979)

- Undergraduate college students who voluntarily participated in a computer-based guidance program were assisted in decision making and in learning skills related to choice of academic major. (Cochran et al. 1977)

- A college credit course, Decision Making for Career Development, used with first and second-year college students undecided about their academic major, career field, or occupation within a career field was instrumental in helping more than 70 percent of the enrollees to select a major and an occupation. (Evans and Rector 1978)

- Short-term counseling with tenth-grade students was utilized effectively to facilitate career maturity. (Flake, Roach, and Stenning 1975)

- A career development seminar for undergraduate college students resulted in participants' viewing work as a more important aspect of life, becoming more personally involved in the career choice process, and becoming more independent in decision making as compared to control students. (Ganster and Lovell 1978)

- Junior and senior high school students participating in an experimental career education program appeared to increase the maturity of their career attitudes and achieve gains on career competencies as measured by the Career Maturity Index career competency tests. (Greene 1973)

- Experience-based career education significantly increased students' (grades 7-14) career planning ability and ability to relate their personal interests and values to career choices. (Hagans 1975)

- When a course on career decision-making skills was used with academic and nonacademic eleventh-grade students, the course seemed to be more effective with the non-academic groups. (Jackson and Egner 1976)

- An experience-based career education program was effectively utilized with students in grades 9-12 to help prepare them for career opportunities and to increase their ability to plan, solve problems, make decisions, and take action. (Maguire 1975)

- Experience-based career education utilizing techniques of time management and short- and long-range planning assisted students in grades 9-12 to achieve growth in basic skills, self-awareness, career awareness, career development skills, life skills, and motivation to learn. (McClure 1975)

- From 50 percent to 69 percent of urban twelfth-grade students who used the Self-Directed Search were able to make a career choice without the aid of a counselor. (McGowan 1977)

- Low-readiness high school sophomores realized more change regarding vocational decision making with individual counseling than with nine computerized vocational information programs. (Melhus, Hershenson, and Vermillion 1973)

- With ninth-grade females, peer social modeling was related to an increase in both the variety and frequency of information-seeking behaviors. (Motsch 1980)

- Tenth-grade students who used the Educational and Career Exploration System made larger gains in terms of choice and use of resources for occupational exploration than did control group students. (Myers et al. 1975)

- Junior and senior high school students participating in an experimental career education program appeared to increase the maturity of their career attitudes and achieve gains on career competencies as measured by the Career Maturity Index career competency tests. (Greene 1973)

- Experience-based career education significantly increased students' (grades 7-14) career planning ability and ability to relate their personal interests and values to career choices. (Hagans 1975)

- Ninth-grade females with average or above-average academic ability who participated in small group sessions on vocational planning after receiving reports of their vocational interest scores demonstrated increased occupational exploration and congruence between occupational preferences and measured interests. (Prediger and Noeth 1979)

- A computer-based career guidance system program appeared to assist undecided college students to make appropriate career decisions better than students enrolled in the traditional program. (Risser and Tulley 1977)

- Career planning experiences and occupational exploration utilizing career logs, career simulations, and written occupational briefs used with academic high-risk, low-economic-status black first-year college students was beneficial in raising their career maturity levels. (Rolle et al. 1977)

- A computer-assisted program and counselor aid used with community college students was found to be helpful in decision-making skills. It was most effective when combined with structured counselor intervention. (Sampson and Stripling 1979)

- Vocational maturity was significantly increased in volunteer first- and second-year college students as a result of career group experiences. (Schenk, Johnston, and Jacobsen 1979)

- Experience-based career education students showed positive increases in test results concerning career knowledge, planning, and maturity. (Shively and Davis 1979a).

- A short-term educational program used with female community and junior college students was helpful in assisting women to enter nontraditional occupations by enabling them to set career goals and to change stereotypical attitudes. (Thomas et al. 1980)

- Use of the Kuder Occupational Interest Survey (KOIS) with high school students was found to have better results with students who were interested in taking an interest inventory and obtaining their results. These students showed more gains in certainty and satisfaction with their planned occupation. (Zytowski 1977)

Theme Summary

In general, career guidance interventions seem to have a beneficial impact on acquiring career planning skills. Of the thirty-four studies reporting evidence on this theme, twenty-seven found a positive outcome. Although many different interventions were used to achieve the outcomes, two were mentioned in over half the studies--EBCE and counseling. Other interventions ranged from computer-based programs to classroom activities.

Career Awareness and Exploration

The final theme, career awareness and exploration, includes a variety of methods for increasing career options; for considering various occupations and career opportunities; for improving awareness, knowledge, and exploration of careers; for broadening understanding of job duties and requirements; for increasing the overall awareness of the world of work; and for enhancing career knowledge generally. Included in this theme are forty-four studies. Major findings of some of these studies are as follow:

- Tenth-grade students who utilized Business-Industry-Training Education classes demonstrated 20 percent gains both in attitude and competency scores. (California State Department of Education 1978).

- Low-achieving, tenth-grade black students participating in a Career Education Resource Center program showed what appear to be positive influences on their career related competencies. (Career Education Resource Center Program 1979)

- Indian youths in grades 10 and 11 made significant improvement in vocational awareness as a result of

vocational, personal, and school counseling; seminars and job exploration field trips; and guest speakers. (Career Guidance for Indian Youth 1976).

- Experience-based career education with high school students enhanced growth in basic skills, career awareness, and interpersonal skills. (Chatham 1975).

- Career exploration with gifted and talented high school students produced affective and cognitive gains in terms of real life career exploration. (Crusey 1979).

- A cooperative education program with community college students revealed that students who participated in an internship experienced greater changes in perceptions of self, and that their classroom experience created more impact on perceptions of their preferred occupations. (Ducat 1980)

- High school students participating in an experience-based career education program showed total battery superiority on the Career Maturity Index as compared to non-EBCE students. (Experience-Based Career Education 1978)

- A career exploration course for first-and second-year students helped the majority of the students to make better career decisions. (Evans and Rector 1978)

- Inner-city tenth-grade students enrolled in general education curricula who had special classroom guidance experiences for one class period per day for one term engaged in more self-initiated exploratory activities, improved their ability to express a vocational preference, and maintained vocational maturity gains on the Career Maturity Index four months after treatment. (Hamdani 1977)

- High school students who participated in a community-based career education program became more adept at analyzing conditions and requirements of occupations, but their understandings of positive and negative rewards associated with various types of work were not significantly affected. (Highline's Vocational Exploratory and Preparatory Program 1978)

- Coordinated activities in a Career Education Resource Center, in the classroom, and in the community, assisted low-achieving, urban tenth-grade students in achieving

significant gains in self-appraisal, occupational information, goal selection, planning, and problem solving. (Page 1980)

- Gifted and talented high school students who participated in the Career Education in the Arts program showed fairly favorable attitudes toward themselves, the arts, and the world of work in the arts on pretests and posttests. Students showed many positive changes in cognitive items that dealt with knowledge about work in the arts and career decision making. (Paul 1977)

- Ninth-grade female students who received a report of their vocational interest scores and participated in small group sessions on vocational planning demonstrated increased occupational exploration and congruence between occupational preferences and measured interests. (Prediger and Noeth 1979)

- College students preferred CHOICES, an interactive computer-based guidance program, over the Self-Directed Search, although both programs received positive ratings. (Reardon, Bonnell, and Huddleston 1982)

- Academic high-risk, low-economic-status black college students in their first year experienced an increase in career maturity level through the use of career logs, career simulations, and written occupational briefs. (Rolle et al. 1977)

- Experience-based career education students showed positive increases in test results concerning career knowledge, career maturity, attitudes toward education, sex role stereotyping, locus of control, and attitudes toward self. (Shively and Davis 1979)

- High school students in either Vocational Preference Inventory or the Self-Directed Search groups were found to be considering more occupational alternatives and were more satisfied with their current occupational choices than were students in the control group. The Self-Directed Search group reported less of a need to see a counselor than did students in either the Vocational Preference Inventory or control groups. (Zener and Schnuelle 1976)

Theme Summary

Forty-four studies reported data in this area. Career guidance interventions appeared to stimulate career awareness and exploration. Various researchers noted that subjects reported more occupational alternatives and greater satisfaction with current occupational choices. Increased knowledge about work and career decision making also were reported. Experienced-based career education (EBCE), particularly, pointed toward improved career awareness of participants. In fact, career exploration was cited by one study as being the strongest component of the EBCE activity.

Of the total, thirty-one studies (70.5 percent) showed positive results in various aspects of this objective. The remaining thirteen (29.5 percent) indicated either no significant differences between the groups studied, mixed results, or minor differences.

The following interventions were utilized: career and vocational exploration (15), experienced-based career education (9), career education (8), counseling activities (8), classroom activities (3), seminars (1), and cooperative education (1). In terms of interventions that showed more positive effects, the following were most prevalent: career and vocational exploration (9) experienced-based career education (7), counseling activities (7), and career education activities (6).

In summary, studies which relied upon such interventions as these reported positive data on improved career awareness: the inventory of knowledge, values, preferences, and self-concepts that an individual uses in the course of making career-related choices. These interventions are most prevalent, too, in career exploration: one's involvement in trying out a variety of activities, roles, and situations in order to find out more about aptitude for or interest in an occupation or other career opportunities.

Types of Career Guidance Interventions*

Ten broad types of career guidance intervention techniques were identified. They are counseling, classroom activities, computer-based programs, placement services, seminars and workshops, experience-based career education, cooperative education, employer-based career education, alternative career education, and career and vocational exploration techniques. For

*Studies are listed by type of intervention, author, and publication in Appendix B.

most types or categories of interventions, a large variety of techniques appear within each category.

The first type of intervention is counseling. Various types of counseling strategies are included within this technique, including group activities, videotaped models, structured interaction, individual activities, and follow-up activities. Twenty-one studies were found that utilized counseling as all or part of the plan to produce desired career guidance effects.

The second type of intervention is classroom activities. This broad group contains the following kinds of activities: career guidance curriculum, career guidance infusion, curriculum models for reducing sex bias and sex role stereotyping, basic skills instruction, guest speakers, films, occupational survival skills training modules, academic instruction, programmed instruction, career logs, career simulation, occupational briefs, and study skills. Thirty studies were reviewed that incorporated at least one of the forms of classroom activities mentioned above as a means to implement career guidance effects.

The third type or category of intervention is computer-based programs. Eight studies were reviewed that utilized this intervention. The computer-based programs implemented in the eight studies included the following: System of Interactive Guidance Information, Educational and Career Exploration System, Computer-mediated Guidance, Computerized Vocational Information System, Computer-based Vocational Exploration, and Computer-Based Career Exploration (CHOICES).

For the fourth category, placement services, two studies were found. Other studies may have also incorporated placement as part of their career guidance efforts, but the two studies (cited in Appendix B) did so specifically.

The fifth type of intervention used seminars or workshops as a means for inducing career guidance effects. Three studies were found.

The sixth category of intervention is experience-based career education. Twenty studies were included.

For the next two categories of interventions, cooperative education and employer-based career education, only one study for each was located.

In the ninth category, alternative career education, three studies were found.

The final category of interventions is career and vocational exploration techniques. Included were studies dealing with one or more of the following strategies: vocational exploration group, Hunt's Matching Model Paradigm, field trips to local employment sites, internships, Self-Directed Search, career planning experience, GATB profiles, community-wide career exploration, the BITE (business, industry, training, education) project, Singer Vocational Evaluation System, Nonsexist Vocational Card Sort, Seeking Alternative Vocational Education, Work Experience and Career Exploration Program, Taylor Manifest Anxiety Scale, Career Maturity Inventory, Vocational Preference Inventory, and Kuder Occupational Interest Survey. Thirty-nine studies were cited for this category.

The Effects of Intervention Types

The previous discussion focused on aggregating research relative to a particular outcome theme (e.g., improved school involvement and performance). This section will review outcome themes in relation to the aggregation of evidence for various intervention types for each outcome theme. Table 1 summarizes these data. Each cell of the table displays the number of studies and the percentage of the studies in which the effect was positive. Three points need to be emphasized with regard to these data.

1. The most frequently mentioned interventions is experienced-based career education. This finding could be an artifact of frequent EBCE experimentation. Because EBCE was a federally sponsored intervention, many evaluations were conducted and reported on the effectiveness of this intervention. Also, EBCE typically was designed as an omnibus intervention impacting on multiple outcomes. In other words, EBCE may be overrepresented in the literature.

2. Overall, the most consistently successful intervention is counseling. Perhaps face-to-face interventions generally are more powerful than those delivered through other areas.

3. Except for seminars and workshops, the other interventions are effective for at least half or more of the total studies. The totals ranged from forty-nine percent for alternative career education to seventy-nine percent for classroom activities.

TABLE 1

SUMMARY DISPLAY OF PERCENTAGE OF SUCCESSFUL OUTCOMES BY INTERVENTION TYPES

	Intervention Type								
Outcome Area	Counseling	Classroom Activities	Computer-based Programs	Seminars Workshops	EBCE	Coop Education	Alternative Career Education	Career Awareness and Exploration Techniques	Total Studies by Outcome Area
Improved School Involvement and Performance	8 (88%)*	7 (100%)	- -	- -	29 (66%)	- -	1 (100%)	7 (43%)	52 (71%)
Personal and Interpersonal Work Skills	- -	2 (50%)	1 (100%)	- -	5 (100%)	1 (100%)	5 (80%)	5 (100%)	19 (89%)
Preparation for Careers	4 (100%)	3 (67%)	1 (100%)	- -	3 (67%)	- -	- -	3 (100%)	14 (86%)
Career Planning Skills	9 (77%)	4 (75%)	4 (50%)	- -	9 (77%)	- -	- -	12 (75%)	38 (76%)
Career Awareness and Exploration Techniques	7 (100%)	3 (67%)	- -	1 (0%)	9 (78%)	1 (0%)	8 (75%)	15 (60%)	44 (70%)
Total Studies by Intervention Type	28 (89%)	19 (79%)	6 (67%)	1 (0%)	55 (73%)	2 (50%)	14 (49%)	42 (69%)	

*Each cell gives the number of studies and the percentage of the studies in which the effect was positive.

Populations Studied*

Career guidance effects studies were grouped according to four major categories: secondary and postsecondary level students (grades 9-14), vocational center trainees, inmates, and mixed grade levels.

The first group, secondary and postsecondary, is by far the most extensive group of studies. To focus on specific populations within this broad category, further subdivisions were identified. These are as follows: rural, inner city and disadvantaged, gifted and talented, handicapped, female, dropout/potential dropout, Mexican-American, Indian, male, and black. A separate category for other students not specifically classified according to one of the previously mentioned subdivisions is also included.

*Studies are grouped by career guidance occupations in Appendix C.

The first major subcategory of secondary and postsecondary level students (grades 9-14) is that identified as rural. Although other studies in this report may have been conducted in a rural setting, only one study specifically declared its population as such.

The next subdivision of secondary and postsecondary level students focused on inner-city or disadvantaged students. Nine studies identified this population as the primary population.

Gifted and talented subjects at the secondary or postsecondary level comprised the population for five studies.

Secondary-and postsecondary-level students classified as handicapped were included specifically in two studies.

Five studies focused on secondary or postsecondary females as the target population.

At the secondary or postsecondary grade level, six studies featured dropouts or potential dropouts as their focal point.

One study specifically identified students of Mexican-American descent as its population. Another study utilized a Native American population.

Five studies isolated male secondary or postsecondary level students as the subjects for their career guidance effects investigations.

Black secondary-and postsecondary-level students were the subjects for two studies.

The final category of secondary or postsecondary level students included those studies that did not specifically categorize students as belonging to any of the previously mentioned groups. Seventy-four studies comprise this group.

Vocational center trainees are the next broad population identified. Two studies utilized students from this type of setting as their focal populations.

Inmates served as the population for two studies.

Four studies were reviewed that combined students from above and below the ninth grade. Although the present study was concerned only with those students classified as being in grades 9-14, the four studies were included because they otherwise met methodological criteria.

Previous Reviews

This section summarizes previous reviews and reports of the effects of career guidance interventions.

Myers' Review

One of the most comprehensive analyses during the early 1970s was Myers' (1971) review of research on education and vocational counseling. His two-part review included outcome studies on decision making and on role functioning (i.e., on general adjustment and academic performance).

In summarizing the research on decision making, Myers indicated that counselors can influence certain activities that may lead to better decision making. This was so especially for activities having to do with seeking relevant information about imminent choices. Myers indicated that this class of behaviors is highly important, as shown by findings that report that the possession of certain types of occupational information in the twelfth grade has predictive value for career behavior at age twenty-five.

Myers also concluded that in working with high school students who volunteer for help in educational-vocational planning, counselors' use of a planned reinforcement strategy during the interview is associated with subsequent increases in the target behavior after counseling and even after as few as two counseling sessions.

In terms of role functioning, Myers reported a number of studies with mixed results at the elementary and secondary school level. However, his most significant analysis related to a study of college and university clients. Myers reported that the study found that--in general-- the counseled group earned better grades, graduated with a higher frequency, received more academic honors, participated more in college activities during their postcounseling college careers, and achieved slightly more in the complex achievement criteria at the twenty-five-year follow-up.

Fretz's Review

In a more recent review, Fretz (1981) focused on "empirically based recommendations" intended to facilitate systematic evaluations of career counseling interventions. His most relevant conclusion with regard to effects was that little progress can be made in improving the effectiveness of career interventions until more specific evaluative attention is given to the relationships of both treatment parameters and

participants' attributes to the diversity of career-related behaviors that serve as outcome measures for evaluating interventions.

For our immediate purpose, the list of outcome dimensions is relevant. Four categories were listed. There is a great deal of commonality with the five themes presented in the current review. Fretz's categories of outcomes were as follows:

- Career Knowledge and Skills

  --Accuracy of self-knowledge
  --Accuracy of occupational information
  --Accuracy of job-seeking skills knowledge
  --Planning and goal selection skills
  --Appropriateness of choices (realism)
  --Range of choices

- Career Behavior

  --Career information seeking
  --Relevant academic performance
  --Seeking initial/new job
  --Getting initial/new job
  --Job ratings
  --Being promoted
  --Earnings

- Sentiments

  --Attitudes toward choices: certainty, satisfaction, commitment, career salience
  --Job satisfaction
  --Quality of life ratings
  --Satisfaction with intervention
  --Perceived effectiveness of intervention

- Effective Role Functioning

  --Self-concept adequacy
  --Personal adjustment
  --Relapses of career problems
  --Contributions to community

Holland, Magoon, and Spokane's Review

Holland, Magoon, and Spokane (1981) reviewed the literature published in 1978 and 1979 that addressed career interventions and multiple forms of vocational assistance. The experimental evaluations of counselors, courses, career programs, card sorts, interest inventories, workshops, and related treatments implied that beneficial effects were due to common elements in the following divergent treatments: exposure to occupational information; cognitive rehearsal of vocational aspirations; acquisition of some cognitive structure for organizing information about oneself, occupations, and their relations; and reinforcement from counselors or workshop members.

In addition, the following conclusions were cited:

- The number and variety of interventions had greatly increased so that practitioners had a larger pool of treatments from which to draw.

- Multiple evaluations suggested that divergent treatments (counseling, inventories, workshops, special techniques, workbooks, and so on) usually had positive effects on clients. These outcomes usually held for a wide range of evaluations that used divergent populations and designs. These outcomes were remarkable in view of the relatively brief period of evaluation (less than ten years).

- An ideal series of related interventions included occupational information organized by a comprehensible method and easily accessible to a client; assessment materials that clarified a client's self-picture and vocational potentials; individual or group activities that required the rehearsal of career plans or problems; supportive counselors, groups, or peers; and a comprehensible cognitive structure that organized information about oneself and one's occupational alternatives.

- The understanding of the development of vocational interests and career pathways was more complete. In particular, the extensive examination of sex-role socialization and interests showed how occupational goals were probably formed, how they were maintained, and how they could be modified.

- The development and revision of occupational classification systems had a pervasive substantive and theoretical impact. These systems greatly facilitated the use of occupational data for counselors, researchers, and participants.

Spokane and Oliver's Review

In a forthcoming publication, Spokane and Oliver (in press) have examined vocational interventions and outcomes. They defined intervention as any effort intended to enhance an individual's career development or enable the person to make better career-related decisions.

The first phase of their study was to review previous outcome research. The summary of eight reviews indicated that researchers seem to agree that most career interventions have some beneficial effects. They diverged considerably, however, when they attempted to account for the observation that few differences could be found among these diverse treatments in their effectiveness. Most reviewers concluded that more work of an analytical nature needs to be done to improve our understanding of treatment effects.

The authors also used a meta-analysis procedure to analyze fifty-two studies that met their criteria. The studies had to include a control group in addition to one or more experimental groups and had to have data necessary to make experimental-control group comparisons.

The authors drew the following conclusions: the outcome status of the average client receiving (1) any type of vocational intervention (2) group/class vocational interventions, and (3) individual vocational interventions exceeded that of 80 percent, 87 percent, and 81 percent, respectively, of untreated controls. The final point (3) was less certain than the other two due to a smaller number of studies. Individual interventions included test interpretation, individual career counseling, reinforcement and/or model reinforcement counseling, and decision training.

The analysis of fifty-two investigations confirmed the conclusions of previous reviewers that vocational interventions generally have been found to have beneficial effects.

Herr's Review

Herr (1982) studied guidance and counseling's philosophical, empirical, and cost-benefits effects in order to draw implications for research, development, and policy. His report contained many findings in the majority of the categories cited in the current review. These are discussed next, according to the outcome category.

- Improved School Involvement and Performance

  Generally, studies reported significant differences in academic achievement and in realistic choice of courses of study in favor of groups exposed to counseling. Group or individual counseling helped improve the performance of underachievers. Community college students in a career planning class were found to perform better academically than those without the class. Students' academic achievement was increased when counselor teams worked with teachers, principals, and parents to help children deal with emotional or social problems.

  Since one major social problem concerns juvenile delinquents and adult offenders, many research findings are available in this area. Lowered rates of recidivism, truancy, and running away are reported in many studies of delinquent and predelinquent children who participated in some type of counseling support services. One study reported that dropout prevention programs that include counseling services proved successful in Chicago public schools.

- Personal and Interpersonal Work Skills

  The effects on self-concept, self-esteem, and mental health took various forms. Persons exposed to counseling tended to organize their concepts about themselves in a more coherent way, leading to harmony between "ideal" and "real" self-concepts. Behavioral modification and other counseling techniques had positive effects on clients with emotional, mental, or motivational problems. Studies reported that students gained a stronger self-concept after receiving various forms of career counseling.

- Preparation for Careers

  Over the years, researchers have studied the effects of guidance and counseling on transition to work and work adjustment. Studies conducted in state employment service offices indicated that clients (in at least two sessions) were more likely to receive a job than those not counseled. This was particularly true for disadvantaged and handicapped persons. In terms of counseling rehabilitation clients, data show that long-term counseling correlated with higher salaries and short-term counseling with more placements. Generally, it was noted that counseling processes have helped workers in sorting out available work choices, in considering personal commitments to work, and in developing ways of deriving feelings of psychological competence in the work place.

- Career Planning Skills

  Career planning, career development, and career decision making are terms used when the intent of guidance and counseling is development of students' knowledge, skills, and attitudes that underlie self-understanding, their awareness of educational, occupational, and life style alternatives, and their ability to choose. Research in this area concluded that guidance and counseling processes helped students become better decision makers. In several studies, persons at various grade levels (junior high through college) were able to make more informed career-related decisions after participating in some counseling processes. Although the specific process used in various studies differed, the majority of the decision-making activities involved some form of group process. Through other group methods, such additional career issues as values and goal clarification, use of relevant information, and job satisfaction were successfully addressed. Also, guidance and counseling films were found to help motivate high school students to obtain additional occupational information. One study found that students using computer-based career guidance systems made greater gains than other students in the areas of planning, knowledge and use of resources for career exploration, awareness of career options, and the costs and risks associated with these options.

Herr also suggested that one appeal of guidance and counseling in the future will be the cost-benefit effects. He reviewed selected studies of cost-benefit analysis to determine types of cost-benefit analyses that should be done. The studies were directed towards psychotherapy, since there were few in guidance and counseling. The use of psychotherapy was cost-effective to hospitals (persons spent less time as patients), clients (persons spent less money for medical care), and society (persons were able to function better on the job and in life). The cost of psychotherapy was less than other means of treatment, and the funds spent to conduct psychotherapy programs were less than for other treatments.

The National Vocational Guidance Association (NVGA) and the Guidance Division of the American Vocational Assocation (AVA) Joint Statement*

In a joint statement of these two associations, Pinson, Gysbers, and Drier (1981) attempted to clarify the importance of quality guidance in strengthening work-related education and training. In doing so, the authors of the statement presented two relevant findings, which are discussed next.

- Improved School Involvement and Performance

  Depressed communities tend to have one or more of the following characteristics: heavy or sparse populations per square mile, high unemployment, low gross national product contribution, little or no new industry, and a large proportion of resident poor. In such locations, there is evidence that guidance and counseling programs alleviated some of the symptoms associated with these conditions. When guidance and counseling programs augmented the delivery of services for potential or actual dropouts, delinquents, or others alienated from established methods or institutions, recidivism rates were lowered, school attendance increased, educational/career goals were more firmly articulated and pursued,

*There has been considerable interaction among researchers in drawing upon a common research data base. The joint statement drew heavily upon the data reported primarily in Herr and Pinson (1982).

and placement rates increase. When these programs used specific approaches--such as peer counseling by indigenous role models, early and continued employer and parent involvement, and employability development through career-oriented instruction--they had consistently high levels of success.

- Personal and Interpersonal Work Skills

  Documentation showing that guidance and counseling programs accompanying vocational skill programs rendered a longer labor market advantage to the graduate persists in the research literature. Beneficiaries of this collaboration were more likely to hold onto their jobs, get work more quickly, transfer job skills and objectives to a larger variety of career fields, and remain more attractive to their employers. It was demonstrated that counseled graduates of skill training programs were more flexible, optimistic, and open to learning on the work site.

Pinson's Statement

Pinson (1980) documented the importance of guidance and counseling for the proposed Youth Act of 1980. In doing so, she drew upon the evidence of the effects of career guidance interventions later in Foundations for Policy in Guidance and Counseling (Herr and Pinson 1982). In addition to the data on effects, Pinson reported on a career guidance system model for use with disadvantaged. Because of its relevance, it is briefly reported here.

According to the model, counseling and guidance services would focus on decision making, problem solving, and self-management. Youth, para-professionals, employers, parents, clergy, and community lay persons would take on much of the counseling responsibilities with professionals assisting. Business and industry's vested interests in increasing profits and improving the quality of the labor supply, combined with a desire to help young people, are expected to provide a timely opportunity to use this resource.

Relevant Congressional Testimony

In addition to the reviews cited above, several recent Congressional testimonies have been presented that included findings originally cited by Herr. In some instances, the testimonies summarized next draw upon that data base. Hence, there is some overlap with the preceding reviews.

Edwin L. Herr (1982) prepared a statement as testimony for the U.S. Senate Subcommittee on Education, Arts, and Humanities' Oversight Hearing on Guidance and Counseling of April 28, 1982. In his statement, Herr summarized some of the most significant studies related to a number of the themes of interest to this review. They are listed next.

o Improved School Involvement and Performance

(School Achievement)

--In general, significant differences in academic achievement and in realistic choice of courses of study were found in favor of groups exposed to guidance and counseling compared with those not so exposed.

--Elementary school children taught behavior-change techniques were found to make greater academic gains than children in the control group on school attendance and social behavior.

--Counseled students in the elementary school were found to make better grades and parents report improved attitudes toward school during a three-year period of time.

--The importance of desiring what one has chosen rather than than being at the whim of others without any personal investment in the choice was a factor in academic success in college. Such behavior was aided by guidance processes.

--Either group or individual counseling extending for a reasonable amount of time helped students whose ability was adequate or better to improve their scholastic performance if they chose to participate in it. Better results were likely if guidance processes focused on the causes of underachievement and what could be done to correct them than if a more general approach was taken.

--Counselor teams that worked closely with teachers, principals, and parents in dealing with emotional or social problems interfering with children's use of their intellectual potential were helpful in increasing general levels of student academic achievement.

--Guidance and counseling processes integrated with remedial instruction in mathematics and reading were found to increase academic achievement significantly.

o Personal and Interpersonal Work Skills

(Self-Esteem, Self-Concept,
Interpersonal Relations, and Mental Health)

--Adolescent black males who were assisted through guidance and counseling to decide upon vocational objectives were found to have more positive self-concepts than those who were not been so assisted.

--Studies of adolescents and young adults in rural areas showed that self-awareness activities, job-seeking skills activities, and peer interactions through group sessions, counseling, career materials displays, testing, and information meetings caused observable positive changes in most of the participants.

--As a function of behavioral modification techniques, it was found that delinquent boys in a community-based home tended to improve dramatically in self-esteem and from externality to internality as compared with a control group.

--Students exposed to guidance processes tended to organize their concepts about themselves in a more coherent way and to reconcile their differences between ideal and real self-concepts more effectively than other persons.

--Middle school students exposed to guidance processes designed to improve their interpersonal skills experienced improved general behavior and interpersonal relationships.

--Elementary school children given relationship enhancement training by an elementary school counselor improved more on empathic acceptance and relationship skills than children not so trained.

--Planned guidance activities were found to raise awareness and the self-concept of sixth-grade children independent of sex, IQ, or school achievement.

--Elementary school counselor consultation with parents was found to affect positively the motivation, self-esteem, and anxiety score of black elementary school students.

--Elementary school counselor consultation with teachers was found to show gains in the children they taught on self-perceptions and peer acceptance.

--Parent-training groups provided by elementary school counselors were found to improve communication skills and had a meaningful impact on parent-child relationships.

--Students who were helped by counselors to evaluate their problems, to break them into their components, and to master them one at a time gained self-confidence.

--Minority students who were assisted in deciding on vocational objectives typically were found to have more positive self-concepts and higher ideal selves than those who did not have such objectives.

--The degree of self-esteem possessed by students related to the appropriateness of vocational choice and to high school achievement.

--A rise in the self-esteem of students exposed to guidance and other counseling processes showed related reduction in dropout rates, reductions in daily absence, and improvement in conduct and social adjustment.

o Preparation for Careers

(Transition to Work and Work Adjustment)

--Guidance and counseling processes helped young workers sort out available work choices, consider personal commitments to work, and develop ways of deriving feelings of psychological competence in the work place.

--Young workers who were trained in job-search and interview skills, communication, and human relations at work were more likely to make an effective transition to work than workers who were not.

--Behavior rehearsal, in which young workers role played with a counselor specific work-related social and interpersonal problems, was more effective in resolving such proolems than direct advice.

--For young persons (disadvantaged and others) preoccupied with economic issues, guidance and counseling that focused on job placement was more effective than broader matters of work adjustment until after the persons secured a job and began to work.

--Disadvantaged youth who participated in counseling were more likely to achieve salary increases and job satisfaction than those who did not.

o Career Planning Skills

(Career Planning)

--Students exposed to systematically planned career guidance classes dealing with topics such as values clarification, decision making, job satisfaction, sources of occupational information, work-power projections, and career planning made greater gains on self-knowledge and the relations of self-knowledge to occupations. They also engaged in a greater number of career-planning activities than students who did not participate in such classes.

--Junior high school students provided with guidance programs specifically designed to do so gained in knowledge and desire to explore nontraditional jobs as compared with control groups.

--Student users of computer-based career guidance systems made greater gains on such characteristics as degree of planning, knowledge and use of resources for career exploration, awareness of career options open to them, and the costs of risks associated with these options than nonusers.

--Both individual counseling and group counseling that involved specific training in self-assessment, gathering pertinent career information, and planning skills enhanced student career planning.

--If students learned about themselves before they were exposed to occupational information or if they could request such information as they were ready, their career planning was significantly facilitated.

(Career Development)

--Systematic group guidance programs that emphasized women and work and entry to nontraditional and traditional occupations expanded the career perceptions of junior high school girls.

--Female senior high school students exposed to guidance programs emphasizing career awareness gained significant improvement in overall career awareness and in factual knowledge of the occupational status of woman.

--Short-term counseling (three sessions) with high school students was found to facilitate the career maturity of these students with regard to emphases such as orientation to decision making, planning, and independence of choice.

--Guidance films (e.g., "Careers in the 70s") were found to affect high school students' attitudes positively, motivate them to seek additional information, and make career choices. These outcomes were strengthened when such films were used as part of a planned guidance program.

--High school students exposed to model reinforcement and reinforcement counseling participated more intensely in external information-seeking behavior than students not so exposed.

--The use of simulated occupational experience in guidance and counseling programs had positive effects on student occupational knowledge among secondary school students.

--In regards to criterion measures in areas such as self-concept, the Iowa Tests of Basic Skills, and other measures of academic achievement and school attendance, it was found that students exposed to career education did as well as or, in most studies, better than comparison students in traditional classes.

(Decision Making)

--Guidance processes helped students become more competent decision makers, select high school courses, and make high school plans more congruent with their abilities than students not exposed to such processes.

--Guidance processes helped students sharpen and/or commit themselves to educational and occupational actions on the basis of personal values.

--Decision-making processes have been taught to junior high and senior high school students within a guidance and counseling setting by using a variety of modeling techniques, sequential learning exercises, and activity packages.

--Directed learning by students of decision-making processes was more effective than nondirected practice. Such directed learning assisted in the transfer of decision-making skills to real life circumstances outside of guidance and counseling settings.

--Counseled students in the middle school were found subsequently to make more realistic choices in choosing high school courses and seeking part-time work according to adult jury ratings.

--Through group problem-solving methods, students were helped to understand the relationship between educational and vocational development, to clarify goals, and to acquire skill in identifying and using relevant information for their decision-making needs.

--Men and women students with identifiable educational goals--reasons that were related to why they were doing what they were doing--seemed consistently to be better prepared for college than students who had no such reasons for being in college.

Other findings that cut across several of the five themes are as follows:

(Long-term Gains)

--In longitudinal follow-ups as long as twenty-five years after exposure to counseling and related guidance processes, persons so exposed in high school or college could be distinguished from peers who did not participate in guidance and counseling on such criteria as higher income and contributions to society.

--After eight years there was a greatly increased correlation between high school senior-year career choice and actual career followed for counseled groups compared with control groups.

--Differences were identified in follow-up studies of high school students two-and-one-half, two, and ten years after high school when those randomly assigned to extensive counseling and guidance services in high school (experimental) were compared with those who were not excluded from such services but for whom no special attempts were made to involve them (controls). Experimental students had better academic records both in high school and after; they had made more realistic and more consistent vocational choices and were more likely to stick with their first choice; they had made

more progress in their employment; they were more likely to have entered college and to have graduated; and they were more satisfied with their lives.

--Career adjustment at age twenty-five and beyond was related to awareness of choices to be made; to information and planning bearing on choices; and to possessing and being able to use occupational, psychological, educational, and economic information by students while in the secondary school.

(Racial Integration)

--Counselors specially trained to provide personal counseling resolved interpersonal conflicts, and coordinated classes designed to improve students' human-relations skills and their understanding of different racial and ethnic groups in order to prevent or reduce racial prejudice and conflict in schools undergoing integration.

--Group counseling that focused on problems of an interracial nature and the promotion of understanding and openness between students from different cultural backgrounds created a related atmosphere in a school and increased intergroup understanding.

--As a function of studying nine thousand persons in 879 schools, it was found that counseling and counseling-support programs clearly correlated with positive racial-climate changes in newly desegregated schools. This finding was especially apparent in the number of interracial friendships formed, how well students of different races worked together, how well teachers worked together, integration of students on the campus and in the cafeteria, and the attendance of Black students.

--Affective education designed to improve racial understanding and provided by trained school counselors did achieve such goals.

--Small face-to-face discussion groups led by experienced counselors assisted school personnel to explore their own attitudes, values, and feelings regrading ethnic differences. This personal understanding in addition to human relations and communication skill training was effective in facilitating intergroup relations and school desegregation.

(Disadvantaged Youth)

--Guidance and counseling for disadvantaged youth is effective when linked to a direct service such as job placement. In many circumstances, until the economic situation of disadvantaged youth is improved, the possibility of helping such youth with other areas of concern is unlikely.

--The combination of counseling with the use of indigenous role models who have succeeded in educational and cccupational options is effective with inner-city youth.

--Comprehensive programs involving self-awareness activities, job-seeking skills, and peer interaction through group sessions, counseling, career materials displays, and testing and information meetings have observable, positive changes among rural youth.

(Juvenile Delinquents)

--Short-term professional counseling, coupled with probation, can have more immediate and lasting effects than probation alone.

--The provision of adult basic education, general educational development, and vocational courses to institutionalized juvenile delinquents is likely to be more effective if career counseling also is offered than if it is not.

--Lower rates of recidivism, truancy, running away, and ungovernability were found in delinquent children who took part in a Baltimore, Maryland project providing counseling and support services, including youth advocates to predelinquent and potentially delinquent children.

--Five public schools in Chicago have implemented dropout prevention programs intended to prevent, control, and eliminate delinquent behavior through counseling, educational assistance, vocational placement, and recreational activities. The success of the program is reflected in a decline in the number of students actually dropping out of school or displaying delinquent behavior. Police records show a reduction in juvenile offenses and arrests. Counseling and discipline records show a decrease in violations of school rules.

--Counseling programs specifically combined with supportive instruction have been found to be successful in motivating truant, low-income male students to attend school regularly.

--Specific programs designed to prevent, control, and eliminate dropouts or delinquent behavior should include combinations of educational assistance, vocational training and placement, and recreational activities and counseling.

--Individual counseling in combination with counselor-conducted training programs designed to emphasize the development of interpersonal, physical, emotional, and intellectual skills that can be applied to home, school, and community problem areas can reduce the recidivism rate for youthful offenders.

(Mentally Retarded Youth)

--Modeling and reinforcement counseling with educable retarded youngsters is effective in facilitating knowledge of how to get a job and in stimulating job-seeking behavior.

--Counseling and testing in combination with training in basic job skills is effective in increasing employment or entrance into further career training among mentally retarded youth.

Additional Congressional testimony is cited briefly as follows.

o From the Statement of Harry Drier on behalf of the Guidance Division, American Vocational Association. House Subcommittee on Elementary, Secondary, and Vocational Education. May 19, 1982.

In view of the not yet comprehensive data base (a circumstance not unique to guidance), the best way of presenting program effects is by highlighting how certain interventions have helped certain groups of individuals deal with the problems of career development. The summaries are part of a growing research base that shows positive effects for guidance and counseling across various populations. It is important to note that these findings are but conservative estimates that have both long-term and short-term client gains.

In addition to the results of reported studies, findings showing positive effects of guidance and counseling were reported by evaluators concerned with the effects of government spending in support of guidance and counseling. A report of the United States Office of Education (1975), Educational Programs That Work, listed more than a dozen counseling programs that were deemed effective by outside evaluators. In Innovative Educational Practice (U.S. Department of Health, Education, and Welfare 1974), six effective counseling programs validated by Elementary and Secondary Education Act Title III evaluators were listed. Similar findings were reported in documents published by the United States Office of Career Education, the Rehabilitation Services Administration, and the United States Department of Labor.

The following items reiterate representative findings by categories of school-age groups:

Elementary Guidance

--Empathic acceptance and relationship skills were improved through counselor assistance.

--Children showed gains on self-perception and peer acceptance as a result of counselors working with parents.

--Parent training groups provided by elementary school counselors increased student communication skills and improved parent/child relationships.

--Children taught behavior change techniques by the elementary school counselor were found to make greater gains in school attendance and social behavior than did those who were not taught these skills.

--Counseled students in the elementary school were found to achieve higher grades; also, parents reported improved attitudes toward school.

Middle/Junior High School Guidance

--Middle school students exposed to guidance processes designed to improve interpersonal skills improved both general behavior and interpersonal relationships.

--According to adult jury ratings, counseled students in the middle school were found to make more realistic choices in choosing high school courses and in seeking part-time work.

--Junior high school students who received guidance exhibited greater gains in knowledge and greater desires to explore nontraditional jobs than did students who received no guidance.

Senior High School Guidance

--Students exposed to systematically planned career guidance classes dealing with topics such as values clarification, decision making, job satisfaction, sources of occupational information, work-force projections, and career planning, had a greater awareness of self-knowledge and the relationship of self-knowledge to occupations than those who did not participate in such classes.

--Through group problem-solving methods, students are helped to understand better the relationship between educational and vocational development, clarify personal goals, and acquire skill in identifying and using relevant information in their decision-making processes.

--Students exposed to model reinforcement and reinforcement counseling independently sought out their own information more often than did students not so exposed.

--Female students exposed to guidance programs that emphasized career awareness gained significant improvement in overall career awareness and in factual knowledge of the occupational status of women.

--Short-term counseling was found to facilitate the career maturity of high school students with regard to areas such as orientation to decision making, planning, and independence of choice.

Postsecondary Guidance

--Men and women students with identifiable educational goals seemed consistently better prepared to attend college than students who had no such reasons for being in college.

--The importance of desiring personal goals, rather than being at the whim of others without any personal investment in the choice, was a factor in academic success in college. Such behavior was aided by guidance processes.

In addition, much evidence could be added in the areas of employer benefits, broad social benefits, and cost savings in relationship to individuals being exposed to quality career guidance and counseling. It is obvious that as guidance decreases self-abuse, work loss, mental illness, absenteeism, unemployment, and crime, the private and public benefits are numerous. As individuals find satisfying work, improve their self-esteem, and earn acceptable wages, billions of dollars are saved through reduced welfare payments, incarceration costs, and mental treatment. Overall social behavior also is much more desirable and is less costly to local and state governments. Reductions in recidivism rates in correctional institutions, in the length of stay in psychiatric hospitals, or in sustained unemployment each carry an economic factor that can be credited to the effectiveness of guidance and counseling.

Ultimately, the effects, that have been shown to result from guidance and counseling in either single studies or multiple studies converge to affect significantly the growth of the gross national product.

- From the Statement of Jeffrey W. Drake, Coordinator of Career Development, Genessee Intermediate School District, Flint, Michigan. Hearings on Reauthorization of the Vocational Education Act of 1963; Part 7: Vocational Guidance and Counseling and H.R. 4974, Vocational Guidance Act of 1981. November 19, 1981.

A statewide Michigan Educational Assessment Program conducted in 1980, pointed out that seventh- and tenth-grade students had some vocational planning and decision-making skills; however, they had difficulty linking these skills with the real work world. Results of the study included the following points:

- Seventh graders had general decision-making skills but did not always link decision making to acceptance of responsibility for the outcomes.

- The most compelling finding from the tenth-grade results was the fact that although while students showed moderate to high decision-making skills and knowledge about planning, evaluating, and implementing life-career goals, very few applied these in their actual life situations. A gap existed between what was known and what was practiced.

- Tenth-graders showed a high level of self-knowledge in their awareness of personal interests and values but were less able to see how they influenced or were influenced in their interests and values.

- From the Statement of James H. Stevens, Counselor, West York Area High School, York, Pennsylvania. Hearings on Reauthorization of the Vocational Education Act of 1963, Part 7: Vocational Guidance and Counseling and H.R. 4974, Vocational Guidance Act of 1981. November 19, 1981.

Stevens testified that work experience programs in which students worked part-time and attend class part-time helped students experience the work world first hand and receive counseling and guidance for work adjustment from a vocational counselor. In career exploration programs, students received school credit for career experiences of a volunteer nature (office aids, hospital voluntary, etc.) to investigate different careers. Shadowing programs also provided students an opportunity for first-hand experience with work. (Mr. Stevens' statement included supportive case studies.)

- From the Statement of Robert W. Stump, Educational Consultant, Arlington, Virginia. Hearings on Reauthorization of the Vocational Education Act of 1963; Part 7: Vocational Guidance and Counseling and H.R. 4974, Vocational Guidance Act of 1981, November 19, 1981.

In response to the question, "Does vocational guidance make a difference?," Dr. Stump noted that a growing body of empirical evidence suggests that guidance and counseling, particularly in combination with other training and educational experiences, is effective in achieving Congressionally sought outcomes such as longer and more stable employment, reduced periods of unemployment, greater flexibility in changing jobs, and a reduction in incidence of school absenteeism, criminal recidivism, dropping out, and other behaviors.

Lastly, two other important statements were made to Congress. Although they did not focus on career guidance effects, they dealt with broader related roles and responsibilities.

- Nancy Pinson, Trustee (1979-1981), National Vocational Guidance Association, Representing the American Personnel and Guidance Association. Hearings on Reauthorization of the Vocational Education Act of 1963; Part 7: Vocational Guidance and Counseling and H.R. 4974, Vocational Guidance Act of 1981, November 19, 1981.

Dr. Pinson provided a rationale for a redirection of vocational education's authorizing language, made a case for vocational guidance, and proposed a solution on how vocational guidance can better be included with vocational education.

- Norman C. Gysbers, Professor, Counseling and Professional Services, University of Missouri, Columbia, Missouri, Representing the American Vocational Association. Hearings on Reauthorization of the Vocational Education Act of 1963; Part 7: Vocational Guidance and Counseling and H.R. 4974. Vocational Guidance Act of 1981, November 19, 1981.

Dr. Gysbers looked at some needs for guidance and counseling programs, presented possible roles of the federal government in meeting these needs, and offered some major policy recommendations.

CHAPTER 4

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter summarizes the study, presents conclusions, and offers recommendations for career guidance policy, practice, and research.

The review was conducted in order to identify reported research studies in the United States and its territories since 1970 that related to career guidance effects resulting from interventions intended to enhance an individual's career development. With few exceptions, the studies included in the report were selected according to the following criteria: (1) the study was conducted after 1970, (2) the population of the study was in grades 9-14, (3) the size of the sample was twenty-five or more, (4) the setting for the study was an educational agency or community service organization, and (5) the study was empirical. Approximately, two hundred studies were reviewed. In addition, the findings of fourteen earlier review of the effects of career guidance interventions were summarized.

Limitations Of The Studies

For most studies, the following methodological limitations were observed:

1. Most studies assessing career guidance effects were field evaluations of program evaluations of program interventions and were not rigorous experimental investigations and/or laboratory experiments. Consequently, the findings should be viewed with the following methodological limitations and problems of field studies in mind: (1) control over sample selection, (2) attrition, and (3) the construction of adequate measurement tools.

2. Group treatments that represent a mix of such intervention techniques as courses, seminars, workshops, job-finding and interviewing instruction, values clarification, and special courses for specific populations (e.g., women, retirees, blacks) are frequently reported to be sucessful. However, it is difficult to attribute outcomes to a specific experience within a treatment or to generalize from one treatment to the next.

3. As in other disciplines, career guidance classifies traits as enduring personality characteristics that are very

difficult to modify (e.g., attitudes and motivations). Even the most sophisticated treatment interventions typically have little impact on modifying these characteristics, especially if used at a later point in the developmental cycle.

Conclusions

1. The preponderance of evidence suggests that career guidance interventions achieve their intended objectives if guidance personnel are given the opportunity to provide structured guidance interventions in a systematic, developmental sequence.

2. Career guidance has demonstrated its effectiveness in influencing the career development and adjustment of individuals in five broad areas:

   --improved school involvement and performance
   --personal and interpersonal work skills
   --preparation for careers
   --career planning skills
   --career awareness and exploration

3. Career guidance has been successful in assisting individuals representing a wide range of subpopulations and settings, such as in correctional institutions, vocational training centers, community colleges, and rehabilitation centers.

4. The number and variety of career interventions has greatly increased giving researchers and practitioners a larger pool of treatments from which to draw. For example, due to significant progress in computer applications for career exploration and choice, there are several dozen models from which to choose.

State and Federal Policy Recommendations

Since 1917 the Federal government and the states have made substantial investments in career guidance programs and services. The findings on the effects of career guidance as reported in this review clearly indicate that these investments are paying substantial dividends. Career guidance programs and services have demonstrated its importance and usefulness across all segments of society for

enhancing the development of our nation's human resources. To sustain and strengthen the contributions of career guidance, to meet national, state, and local conerns and individual needs, the following recommendations are provided:

1. National, state, and local education and employment and training policies should be written to include the total comprehensive career guidance concept. The concept should be employed in all future employment and training and education legislation. Although the studies demonstrated effects for five broad areas of career development, it was rare to find studies that examined the impact of interventions on career development longitudinally across areas. For career guidance to be more effective, it needs to be supported and evaluated as a total comprehensive program from early childhood through the adult years and not as a "hit or miss" fragmented collection of services.

2. National, state, and local employment and training and education policy statements should recognize and support the inclusion of career guidance programs and service as an integral and central strategy for economic development and revitalization. It has been clearly demonstrated in the studies reviewed that career guidance programs and services are key in helping our nation respond to the need for national, state, and local economic development and revitalization.

3. Federal career guidance leadership should be at least at the division level to insure that the leadership participates fully in policy determinations and has the appropriate level budget and staff to meet the expectations and mandates of national policy and legislation. For career guidance programs and services to be effective, leadership at the federal level needs to be strengthened. At present, provisions for career guidance are contained in fourteen federal acts spanning multiple agencies.

4. Policy and legislative provisions should clearly indicate and provide for state career guidance leadership. For career guidance programs and services to be effective, leadership at the state level also needs to be strengthened. State level leadership for career guidance plays a pivotal role in relating local and state needs to national needs and vice versa. State level leadership are a key link in the overall national, state, and local delivery system for career guidance programs and service.

5. Employment, training, and education policy and legislation should contain provisions to improve and strengthen state and local efforts to collect, organize and disseminate career and labor market information. Career information was a critical tool in almost all studies of career guidance effectiveness. It is vital that adequate support be given to continue to improve and strengthen the development and delivery of career information. This would include the continued support of U.S. Department of Labor programs such as the Dictionary of Occupational Titles, the Occupational Outlook Handbook and the NOICC/SOICC systems.

6. National, state, and local policy and legislation should support a wide range of updating activities for guidance personnel. This would include but not be limited to:

   --regular contacts with local business and industry
   --short term workshops in local business and industry
   --regular exchanges between education and employment personnel
   --on-going updating sessions for guidance personnel on new career and labor materials and techniques.

   For career guidance programs and services to be effective, career guidance personnel at all levels need to be updated concerning new techniques, materials, and resources on a regular basis. At present, there are limited opportunities for this to occur.

7. National, state, and local policy and legislation should provide for a nationally coordinated research and development effort for career guidance programs and services. This would include but not be limited to:

   --a nationally coordinated and funded research program to improve career guidance programs and services

   --a nationally coordinated and funded development program to improve career guidance techniques, materials, and resources.

   At present, there are very limited resources to sustain a consistent attack on priority research issues and to provide support for programs to upgrade their services.

8. To insure that career guidance programs are well organized and systematic, annual state planning should indicate how programs are to be implemented and evaluated. Although some states have developed state

plans, there is a notable absence of periodic evaluations of the plans. Evaluative information would be useful to correct program deficiencies and to identify gaps in program delivery.

Career Guidance Practice Recommendations

1. Programs should be designed for the continuity of individual career development. A major disadvantage of examining the outcomes of various career interventions is that one often overlooks the total continuity of individual career development as a person progresses from one career stage to the next. Typically, the studies that have been reported only deal with a piece of individual career development (e.g., exploration or decision making). It is important that programs be designed and evaluated to look at the continuous growth of individuals developmentally across stages. Programs should be more comprehensive in providing this developmental process for the individual. Too often program developers feel they have done their job simply by completing the initial stages of developing career awareness, exploration, and decision making. Additional assistance should be offered for the continuation of this development through subsequent stages through such activities as assisting with the implementation of plans, the selection of education programs, and job placement and adjustment.

2. More emphasis should be placed on exploiting what activities work and on strengthening them to achieve optimum career guidance effects. Too often program developers invest their time in reinventing the wheel rather than in strengthening what currently exists. Resources should also be expended to strengthen weaker areas of intervention, such as job finding, placement strategies, and vocational adaptation.

3. There is the need to establish a larger number of highly trained, institutionally supported and effective teams of guidance workers. Pinson, Gysbers, and Drier (1981) advocate this to assure a more comprehensive delivery of guidance services to all students in all settings.

4. A comprehensive list of client competencies should be developed to provide program direction. The many studies reviewed in this report identified an impressive array of client objectives to be achieved by career guidance programs. Although they were organized here into five

broad themes for reporting purposes, there was no attempt to organize them into a systematic program for career development due to the diffuse collection of studies. However, they suggest the need to formulate a comprehensive set of career guidance objectives and to translate them into a series of sequential client competencies that could provide national direction for programs.

5. School- and agency-based career guidance activities should be more closely integrated with private sector experiences for clients, whenever feasible. A number of studies demonstrated the importance of real world experience in achieving career guidance objectives; they provided an essential element of realism and relevance for the student.

6. Programs should not rely solely on a few traditional techniques to achieve their program goals. Due to the wide ranges of program goals and individuals within a program, programs should be expanded to include a variety of interrelated activities that systematically foster career development.

7. Career guidance activities that are too general or ambiguous should be avoided. Carefully planned and highly structured career guidance activities are advocated. The structured activities should include (1) clearly stated objectives in terms of client outcomes, (2) specific and meaningful client activities to achieve the objectives, and (3) a measure of assessing client achievement of the objectives.

8. Self-initiated, periodic evaluation of the degree to which career guidance programs are achieving their objectives should be conducted more frequently. If formal evaluations are not feasible due to time constraints, alternative evaluation procedures should be considered informally, such as holding an open forum to assess program status. The latter can be quite effective in determining what works, what does not work, and in identifying program impediments.

9. Counselor education programs should be competency based in order to insure that counselors acquire the necessary skills to meet the full range of their client's needs. The studies reflected a wide latitude of program objectives which require a broader range of skills than traditionally have been provided.

Research Recommendations

1. There is a need for researchers to report more complete data. A frequent frustration in reviewing research reports is that the reports often are too sketchy and key information is missing. The importance of fully reporting the data is crucial. It is not uncommon for researchers to fail to report key information, such as an adequate description of the intervention and/or data on outcomes.

2. A classification of outcomes should be developed and tested. Student outcomes and interventions strategies were described in this report as they were reported by the researchers. Although it was beyond the scope of the study to develop a refined system of classifying outcomes, it would be a contribution to do so. Most research reports provide limited information about the vocational effects a treatment has had on an individual's vocational behavior. For example, reporting that students made significant gains on a specific test tells very little about what this means vocationally for the person. Oliver and Spokane (see Oliver 1979) are developing a classification system of outcome measures, but it must be tested and refined and, if it proves useful, must be accepted and used by other vocational researchers.

3. A classification of interventions should be developed and tested. Similarly, research to improve the classification of interventions is recommended. In this report, a broad classification was used, but it was nonspecific and overlapping; it failed to give specific information about what works for a given intervention. For example, videotape models used as a group counseling technique were found to be useful, but specifically what was it about the use of videotape models as a group counseling technique that brought about the behavioral change? A thorough analysis of the critical factors for various intervention techniques would be a major undertaking and would serve as a useful guide for guidance counselors. The classification of interventions would require a careful analysis of the key factors that produce outcomes and would require much more thorough information than is typically found in most published reports.

4. Comparative studies are needed of intervention techniques for the same problem. Herr (1982) has proposed that we need more research on the comparative effects of different guidance counseling processes addressing the same problems. In other words, how do we know what works and what does not work with different clients having the same problem? A compendium of differential techniques would be extremely useful as a guide for practitioners.

5. Research is needed on differential interventions by age. Are there differences in the type of techniques used at different developmental ages? For example, are techniques used for career exploration the same for youth as for older adults? Campbell et al. (1979) have developed a diagnostic taxonomy of adult career problems that outlines the range of possible career problems encountered by adults across the life span. Each of these could be examined for their relevance to appropriate techniques.

6. Research is needed on interventions specific to varying populations. Should intervention techniques vary for different populations; that is, do persons of different ethnic and/or racial backgrounds require different guidance techniques?

7. A substantial comparative study of comprehensive approaches is needed. Except for a few isolated studies, there is very little longitudinal research on the impact of career guidance and its long-term validation. A number of possible highly useful designs could be generated. For example, it would be helpful to study the comparative effects of different comprehensive approaches for providing career guidance. This would require a massive research investment, but it would reveal what approaches are most strongly advocated, that is, whether truly systematic comprehensive programs of career guidance are more effective than piecemeal approaches.

8. Cost-benefit studies are needed. In this age of accountability, there is increasing pressure to conduct cost-benefit analyses of the effects of guidance and counseling. Some models have been proposed but very few have been implemented. It would be useful to test both micro- and macro-approaches.

9. Research is needed on the optimum mix of public and private sector services. In every community there are numerous career guidance agencies offering different services, such as job placement, vocational assessment, and career exploration to various target populations. Studies are needed to determine the optimum combination of services in a community for the most effective delivery of career guidance. For example, what is the best combination of private and public sector services to assist people with their career development? Too often there is unnecessary duplication of these services within a community. The National Center for Research in Vocational Education, in cooperation with the American Institutes for Research and the University of Missouri, Columbia, are presently engaged in examining a community collaboration career guidance concept; this involves a tryout of the concept in twenty-two experimental community field sites across the country representing rural, urban, inner-city, and suburban communities.

10. More research is needed to determine what kinds of career guidance intervention activities do not work. Emphasis in most research is usually placed on examining what does work for career guidance intervention. It might be profitable to examine the reverse of these by studying what activities do not work and by carefully identifying the critical factors. This information should be useful in identifying what guidance intervention activities should be avoided or are generally useless.

11. Research to enable more careful diagnosis of client needs in the design of interventions is needed. More rigorous and analytical evaluations are necessary in which client goals are linked to treatments via a goal attainment scale or diagnostic procedures in order to acquire a comprehensive knowledge of client treatment interactions and related outcomes. Too often the effects of the intervention on a total population are assessed without more carefully examining the specific needs of individuals within that population.

APPENDIX A

STUDIES GROUPED BY THEMES OF CAREER GUIDANCE OBJECTIVES

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THEME *	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
IMPROVED SCHOOL INVOLVEMENT AND PERFORMANCE • School Retention	School retention	Individual counseling, group counseling, field trips to local employment sites, guest speakers, films.	Egg Harbor School District, New Jersey	Target population: 100 ninth-grade students identified as potential dropouts in each school.	A significant decrease in dropout rate was noted for Oakcrest High School (11.4 percent). A neighboring school that did not have the program had an increase in dropouts of 11.4 percent. There was an increased use of the computer for career information, more field trips, and an increase in possible careers identifiable by participants.	Campbell, R.B, 1981.
	Improved attitudes toward school; reduction in dropouts; increased vocational awareness; increased motivation toward future vocational opportunities; reduced contacts with the law; increased awareness of future employers; exposure to successfully employed Indians and tribal members.	Vocational, personal, and school counseling; seminars and chaperoned, sponsored job exploration field trips; guest speakers.	Five Arizona high schools	10th and 11th grade Indian youths, n = 160	The following summarize major findings: • an increased awareness of services offered by the Colorado River Indian tribes and of how school problems may be related to cultural factors; • a general impression that Indian students' attitudes toward school were much improved; • a significant reduction in school dropouts; • a significant improvement in vocational awareness; • increased motivation toward future vocational opportunities; • reduced contacts with the law; • increased awareness of future employers; • exposure to successfully employed Indians and tribal members.	Career Guidance for Indian Youth, 1976.
	Basic academic skills; career decision-making skills; community learning experiences; school retention; attitudes toward self and school.	Alternate learning project--individual basic skills program, college preparatory course; community-wide career exploration activities; a broad arts program; counseling.	Secondary schools (also middle and adult).	Students in grades 9-12.	Absenteeism and dropout rates were reduced. Attitudes toward self and school were improved.	Kenyon, C.B., 1974.

*Some studies will be listed under more than one theme. These will be noted as appropriate.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• School Retention (continued)	Completion of vocational training programs.	GATB Profiles and Counseling or no prescreening nor counseling prior to enrolling in training programs.	Choffin Vocational Center, Youngstown, Ohio.	Male trainees (16 to 22 years of age); n = 73	Of the thirty-seven trainees who did not undergo the preparation procedure (General Aptitude Test Battery and Counseling), only 13 percent graduated from their respective courses. In contrast, about 83 percent of the 36 trainees who had prescreening and counseling completed their respective courses. Results are consistent with previous assertions supporting the inclusion of the GATB as part of a preselection procedure and vocational counseling as a preparatory procedure for admittance into Vocational training programs.	Serednesky, G.; Cahill, L.; and Engelhart, C.I.; 1974.
	School retention-- • stay in school • earn more credits • reduce unexcused absences • increase participation in school activities • set and attain own learning objectives • improve reading skills • raise self-esteem.	Classroom guidance, case conferences, peer counseling, parent information, counseling groups for parents, community group cooperation, self-esteem group, teacher support, attendance monitoring.	Pajaror Valley Unified School District, California	Students in grades 9-12 (potential dropouts); n = 448	After three years, 72 percent of the target potential dropouts were enrolled in the district high schools, whereas only 22 percent of the comparison students were still enrolled (chi square = 81.42; significant beyond .001). All seven student performance objectives were met or exceeded in year three. With regard to attendance, more that half of the chronic truants (twenty or more days absent in preceding year) had no unexcused absences in year three. Regarding units or credits earned, forty-five target students with less than 20 units per student increased to 794 total units in the fall of 1978 from 479 units in the fall of 1977. Gain was 66 percent. Comparison students gained only 5 percent.	Stoker, J., 1979.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• School Attendance	Student achievement in English skill areas; student attitudes toward education; student attitudes toward work; improved attendance.	Experience-based career education (EBCE).	Kanawha County, West Virginia School System	Twelfth grade students; n = 60	A significant difference was found to exist between experimental and control groups on the five Comprehensive Test of Basic Skills (CTBS) subtest-posttest scores when considered simultaneously. Analysis of the data relevant to growth in the area of career maturity, as measured by the attitude subtest of the Career Maturity Inventory showed no significant difference between the experimental and control groups. Evaluation of the data on student perceptions of education obtained from the semantic differential scales (Osgood) also showed no significant differences between the EBCE students' perceptions of their educational experience and those of the control group.	Carey, M.A., and Weber, L.J., 1979.
	Self-knowledge interests, abilities, needs, values; positive work attitudes; knowledge of occupational possibilities, structure of world of work, job duties and requirements; decision-making, problem-solving, planning skills; seeking, creating, evaluating, communicating vocational information; job-seeking skills; school attendance.	Curricular experiences (one class period per day for one term--about 100 hours).	An inner-city high school in New York City.	Forty-two boys and thirty-five girls enrolled in tenth-grade general education curriculum; n = 77	The treatment group engaged in a significantly greater number of exploratory activities (self-initiated). At the end of the treatment, the number of students expressing no vocational preference had declined from 30 percent to 10 percent. There was a significant improvement in attendance and punctuality during the treatment period. Four months after treatment, test results of treatment students on the Career Maturity Inventory revealed that the gains in vocational maturity were still present. Improvement in attendance was also mentioned. The number of school- and self-initiated exploratory activities declined after the treatment period ended. However, the experimental students were still showing more exploratory behavior than nonparticipants.	Hamdani, A., 1977.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• School Attendance (continued)	Attitudes toward work; school attendance; improved work habits in school.	Experience-based career education.	Harrisburg, Pennsylvania high schools.	High school students	EBCE students showed improved attitudes toward work and recognized the importance of learning marketable skills, improving work habits, and attending school. Overall reactions from parents, employers, and students were favorable.	Handler, L., et al., 1978.
	See Stoker, J., 1979, in the theme section on School Retention.					
• School Participation	Improve basic skills; generate positive attitudes; develop career and occupational competencies; improve cooperation and understanding between career and vocational education staffs; improve integration of programs and services.	Integration of compensatory, vocational, and career education.	Seven California high schools.	High school educationally disadvantaged students.	Pre- to -post-test data from two programs strongly suggested significant changes in achievement levels over the project period.	Holmes, D.H., 1979.
	See Stoker, J., 1979, in the theme section on School Retention.					
• Academic Performance	Improvements in attitudes toward self, school, others, education in general; improved academic achievement.	Experience-based career education (based on Northwest Regional Education Laboratory model).	Conecuh County, Evergreen, Alabama	Twenty-three EBCE students and fifteen comparison students; n = 38	Improvements in self-attitudes, attitude toward school, attitude toward education in general, and increases in academic achievement comparable to that of students who participated in the traditional setting indicated substantial need for the program.	Conecuh County Experience-based Career Education, 1977.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVE	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Academic Performance (continued)	Improved academic achievement, attitudes toward careers, career maturity.	Community-based career experiences and career resource room, individualized course of instruction with community experiences.	J. L. Mann High School, Greenville, South Carolina.	High school students; n = 87	English and mathematics performance on standardized tests indicated that EBCE students were performing as well as comparison students. EBCE students showed significant growth in writing skills as a result of a focused effort on writing ability. The Career Maturity Index showed total battery superiority of EBCE students to comparison students. There was some evidence of appropriate attitude development. A review of the guidance component by an outside guidance specialist yielded high results for the entire guidance program.	Experience-based Career Education, 1978
	Academic skills; life skills; career development.	Experience-based career education (individualized projects).	Schools-- grades 7-14.	Students in grades 7 through second year of college.	Significant increases were reported in students' career planning. Progress was also noted in students' ability to relate their personal interests and values to career choices.	Hagans, R., 1975.
	Career maturity, academic achievement; career development.	Career Education Incremental Project	Elementary and secondary schools.	Students in grades 7, 9, 11.	The Career Education group had higher levels of career education maturity, especially grades 7 and 9. The Career Education group's scores exceeded the Career Maturity Inventory norms. Program assessment findings were that twelfth-grade students felt the need for more career-related experiences and activities especially in school-to-work transition. Achievement test scores that were below norm improved to be at or above the norms in later grades. Students' tentative career choices over a period of eight years showed less variation. Professional findings revealed that seventy principals, counselors, and teachers surveyed had positive attitudes towards the importance of career education activities, their involvement, and career education in general, and rated their programs as effective.	Omvig, C.P., 1979.

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Academic Performance (continued)	Growth in academic skills, career awareness, basic skills, social skills.	Experience-based career education.	High school.	High school students.	Effectiveness was shown in achieving student growth in basic skills, career awareness, interpersonal skills, and motivation to learn. Moreover, there was evidence of increased mobilization of community support, and preparation of graduates to enter college, seek employment, or seek further training.	Peterson, R., 1975.
	Greater familiarity with career opportunities in the field of public service; greater self-awareness; good work habits; academic, vocational, and employability skills.	A public service administration internship program.	A Montgomery County, Maryland high school	Gifted and talented high school juniors and seniors; n = 33	Among the findings were overall student satisfaction with the program, and overall sponsor satisfaction with the program, especially in the area of demonstrating good work habits. In the area of self-awareness, results from Student Attitude Survey showed that second semester interns held basically positive attitudes about themselves and felt that they knew themselves well enough at least to begin to make logical career decisions. In spite of their basically positive self-concept even at the beginning of the program, some pretest (January) to posttest (May) changes were noticed. Regarding academic, vocational, and employability skills, there was some inconsistency in interns' attitudes about the relevancy of skills they learned in school to their function in the world of work. Sixteen of eighteen students agreed or strongly agreed that they may use the same skills they used in school.	Public Service Administration Internship Program in Career Education, 1978.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Academic Performance (continued)	Life Skills--including career, social, and avocational; decision making; academic performance.	Employer-based career education.	High school and community.	High school students.	The study showed a great deal of success but was not compared to other guidance programs.	Sanders, J.H., and Bertram, C.L., 1973
	Career planning; attitude improvement; academic performance; career maturity.	Alternative career education program.	Eleven county high schools.	Junior and senior high school students.	The program successfully served as an alternative career education program. It was demonstrated to be an integrated, transportable product since it was successfully implemented in a local high school. It was demonstrated to be an enjoyable experience since it was positively received by students, employers, parents, and former students.	Shively, J.E., 1975.
	Career decision making; employment seeking; academic achievement; motivation toward school.	Experience-based career education.	High school.	Twelfth-grade students; n = 40	The project received substantial support from the community. Students made significant gains in academic subjects as well as in career decision-making and employment-seeking skills. Students' motivation level toward school was increased; the project was well managed, implemented, and publicized.	Stead, F. L., and Hartnett, R.A., 1978.
	Academic achievement and locus of control.	1. Group counseling and group skills instruction. 2. Group counseling, study skills instruction, and faculty counseling or consultation. 3. Group counseling, study skills instruction, and individual internal/external locus of control counseling.	Davis and Elkins College, West Virginia	Students participating in the Williams James House counseling program; n = 63	Upon completion of the program, the groups were compared on first-term grade-point averages and the Rotter Internal/External Locus of Control Scale. The t-test was used to analyze the test score means of the three groups, two at a time, to test the null hypotheses that were generated by the study: a) There will be no significant difference between the first-term grade-point average means of Groups 1 and 2, 2 and 3, and 1 and 3. b) There will be no statistically significant difference in post-internality scores among Groups 1, 2, 3. (continued on next page)	Whyte, C.B., 1978

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Academic Performance (continued)					Analysis of variance was used to analyze the test score means of groups with reference to grade point average before the t-test was applied. Group 3 students had a statistically higher grade-point average than participants in Groups 1 or 2 at a .001 level. Students with faculty/counselor consultation as a part of the treatment scored significantly higher on grade-point average than did students in Group 1 at a .001 level. Individual attention and emphasis on internal/external locus of control counseling may have benefited high-risk students.	
• Learning-Study Skills and Attitudes towards School	See Career Guidance for Indian Youth, 1976, in the theme section on School Retention.					
	See Carey, M.A., and Weber, L.J., 1979, in the theme section on Attendance.					
	See Conecuh County Experience-Based Career Education 1977, in the theme section on Academic Performance.					
	Improved basic skills, attitudes toward work and study, career exploration; increased knowledge about non-traditional work roles.	Experience- ased career education.	Wichita East High School	Students in grades 10, 11, and 12; fifty-one ECBE students, forty-one control-group students; n = 92	The objective measures of the achievement of EBCE program objectives revealed only minor differences between EBCE and control groups.	Crawford, G. and Miskell, C., 1978.

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Learning-Study Skills and Attitudes towards School (continued)	Career exploration skills and knowledge; communication skills; study skills; higher level thinking skills; problem-solving skills.	Career exploration.	Three pilot schools in Jefferson County, Colorado.	Gifted and talented high school students.	The project was evaluated as being successful in producing both affective and cognitive gains in the participants in terms of real life career exploration.	Crusey, C., 1979.
	Prepare for career opportunities; growth in English and mathematics; increased accuracy and breadth of perceptions of environment; enhanced motivation to learn; increased abilities to plan, solve problems, make decisions, and take action.	Experience-based career education.	High schools and community.	High school students (300 in treatment).	Significant student gains were reported for career development, basic skills, and attitudes toward school.	Experience-Based Career Education Project, 1982.
	See Kenyon, C.B., 1974, School Rentention.					
	See Shively, J.E., 1975, Academic Performance.					
	Time management and short-range and long-range planning.	Experience-based career education	Secondary schools.	Students in grades 9-12.	Student growth was shown in the following areas: basic skills, self-awareness, career awareness, career development skills, life skills, and motivation to learn.	McClure, L., 1975.
	Academic skills, planfulness; positive attitudes toward community and school; increase in knowledge and use of resources in non-traditional occupations.	Experience-based career education.	Secondary schools in a community college district.	10th and 11th grade students.	Results indicate maintenance of some academic skills, increase in attitudes of planfulness, positive attitudes toward community and school (for boys), and an increase in knowledge and use of resources in non-traditional occupations (for girls).	Neely, M.A., 1979.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Learning-Study Skills and Attitudes towards School (continued)	Preparation for career opportunities; growth in communication skills and math; increased accuracy and breadth of students' perceptions of environment; enhanced motivation to learn; increased abilities to plan, solve problems, make decisions, and take action.	Experience-based career education.	High school.	Students in grades 9-12.	Results supported program effectiveness in all areas. It also appears to reduce school dropout rates.	Quinn, M., 1973.
	Career knowledge and planning; career maturity; attitudes toward education; attitudes toward sex role stereotyping; attitudes toward self.	Experience-based career education.	Conecuh County, Alabama schools.	EBCE and non-EBCE students.	Analysis of student outcome data indicated that EBCE students did as well as comparison students and in some cases higher on tests of basic skills. EBCE students showed positive increases in test results concerning career knowledge and planning, career maturity, attitudes toward education, sex role stereotyping, locus of control, and attitude; toward self.	Shively, J.E. and Davis, C.S., 1979b.
	Improve attitudes toward learning.	Alternative high school program.	High school.	High school students dissatisfied with previous high school experience.	Evaluation results showed that in all areas measured, the treatment group compared favorably with other high school students. Greatest gains were found in reading skills and in attitude toward school.	Smith, G., 1975.
	Basic skills; attitudes toward school; relationships with adults; career development.	Experience-based career education.	High schools (three sites).	EBCE and non-EBCE students.	Both experience-based career education (EBCE) and control students progressed normally in basic skills and showed an increased level of career development activities, improved school attitudes, and improved relationships with adults. EBCE students showed gains in areas measuring activities rather than in knowledge, and more positive perceptions of growth than did the control group.	Spotts, R., and Evenson, J., 1977

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Learning-Study Skills and Attitudes towards School (continued)	See Stead, F.L., and Harnett, R.A., 1978, Academic Performance.					
	See Stoker, J., 1979 School Retention.					
	Positive attitudes toward task completion; pride in accomplishment; awareness of variety of workers, dignity of work, self-worth.	Career education.	High school.	Students in grades 9-12.	Program efforts provided knowledge consistently higher gains for program students than for other students.	Topougis, N., 1978.
• Basic Skills	Work habits and values; decision-making skills; job-hunting skills, job-getting skills; job-entry skills; oral communication; writing skills, basic quantitative skills.	Career Education Plus (CE +).	Minot High School, North Dakota.	9th and 10th grade students.	Specific behavioral objectives, either achieved or partially achieved, follow: improvement in oral communication, improved writing skills, improved quantitative skills. Satisfactory completion of projects and competencies and development of career knowledge and career exploration was accomplished. Objectives not achieved follow: improvement in reading skills, development of self-knowledge, more positive attitudes toward work, and higher level of career awareness.	Career Education: Planning, Learning, Understanding, and Succeeding (CE +), 1977.
	See Carey, M. A., and Weber, L. J., 1979, School Attendance.					
	See Crawford, G., and Mitchell, C., 1979, Learning-Study Skills.					
	See Crusey, C., 1979, Learning-Study Skills.					

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
	Career development (planning, decision making and problem solving); experimental learning opportunities; academic growth in mathematics and communication skills.	Experience-based career education.	Three high schools in Puerto Rico.	80 experimental, 80 control group high school students; n = 160.	Project met all purported objectives; staff were trained to carry out program; EBCE can be utilized in urban and rural settings in Puerto Rico; project students heavily endorsed project over regular school program; parents praised project; analysis of test data in academic areas for experimental and control groups indicated that the EBCE students showed a greater gain over the control group in almost all areas.	Experience-Based Career Education Project, 1982.
• Basic Skills (continued)	Career maturity, career knowledge, learning attitudes, self concepts; basic skills.	Career exploration activities, career counseling, academic instruction.	Seven communities in Rhode Island.	High school juniors and seniors.	Test results indicated that EBCE students tended to show gains (some significant, some not) in all test areas and that academic achievement was not hindered by EBCE participation. Staff, students, and employers rated career exploration as the strongest component. The counseling component was helpful in sharing ideas and experiences.	Experience-Based Career Education, 1978.
	See Experience-Based Career Education Project..., 1975, Learning-Study Skills.					
	See Holmes, D. H., 1979, School Participation.					
	Career knowledge; attitudes toward learning environment; basic skills.	Career exploration, career guidance, basic skills.	Secondary school.	259 experimental students; 109 comparison students; n = 368.	Data analysis supported program effectiveness in the career knowledge component of career skills over a two-year period. Both first- and second-year experimental students showed significant improvement in attitudes toward learning environments. The experimental students' post-test levels were found to be significantly higher than the control students' scores. The experimental program was not demonstrated to offer advantages in the provision of basic skills instruction.	Kershner, K. M., and Blair, M. W. 1975.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Basic Skills (continued)	Prevocational skills; guided job exploration; reading comprehension, mathematical skills; observation of and experience in nontraditional work setting.	Experience-based career education (individualized curriculum).	Six secondary and two postsecondary schools.	Secondary seniors, high school dropouts, high school graduates, postsecondary students, individuals not enrolled in school (educationally disadvantaged--. more than 600 participants directly involved.	The experience-based career education students' mean score increased on two of the five Career Maturity Inventory (CMI) subtests and declined on Parts I-II. The nonparticipants' mean score declined on all of the CMI subtests. With regard to reading comprehension, the EBCE group had clearly higher posttest scores at the points of comparison. Although the differences were not statistically significant with regard to the CTBS mathematics computation scores, the EBCE group mean increased from pretest to posttest by about one point. The comparison group, however, declined in mean score by about one and one-half points. (The researchers speculated that lack of motivation to perform well probably affected results. With regard to CTBS mathematics applications scores, the EBCE group mean increased about one point while that of the comparison group decreased about six-tenths of a point. (The decline in scores of the comparison group may have exaggerated any existing differences between the groups.)	Mattison, W. H., 1979.
	Career skills (awareness and knowledge); life skills; basic academic skills.	Experience-based career education.	Four Utah high schools.	EBCE students (115 girls, 113 boys) and control group students (randomly selected students from English classes); n = 228.	The Experience-Based Career Education (EBCE) project was well organized and managed at all levels. High commitment and enthusiasm were shown by school personnel, administrators, parents, community employers, and students. Grade patterns of EBCE students were basically uniform with those of control students. Tests of academic skill development did not show significant gains in EBCE students as compared to control students. Overall, EBCE students did show increased career awareness and career knowledge.	Muse, I. D., and Coombs C.G., 1978.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Basic Skills (continued)	Career skills; life skills; basic academic skills.	Experience-based career education.	High schools in Weber and Morgan County school districts, Utah.	10th grade students in Weber County; 9th and 10th grade students in Morgan County school district.	Students did make changes in their career knowledge and attitudes toward learning environments; and although they did not show any increased mastery in all career skills, life skills, and basic skills, neither did they show any decrease. Results of questionnaires administered to students, parents, site coordinators, and teachers were generally favorable. Evaluation of grade patterns for EBCE students in English, science, and math showed that, on a group basis grades remained about the same for the year. It was significant that the EBCE program had no detrimental effect on student grades even though students spent a considerable amount of time off campus at employer sites.	Muse, I. D., and Coombs, G., 1977.
	See Neely, M. A., 1979, Learning-Study Skills.					
	Life skills; basic skills; career development.	Experience-based career education.	High school.	11th and 12th grade students; n = 63	Experience-Based career education students generally performed better on the criterion referenced tests than did the control students. Both students and parents viewed the program positively.	Parkway Experience-based Career Education, 1977.
	See Peterson, R., 1975, Academic Performance.					
	See Quinn, M., 1973, Learning-Study Skills.					
	See Spotts, R., and Evenson, J., 1977, Learning-Study Skills.					

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Basic Skills (continued)	Life skills and career development; basic skills.	Experience-based career education.	Four school districts in Wyoming: Cheyenne, Laramie, Lander, Glenrock.	EBCE and non-EBCE students.	Students had positive feelings about the project, with strong emphasis on student journals and and job explorations. The overall conclusion was that the project was implemented and managed in an excellent fashion and that progress in all areas was satisfactory.	Wyoming State Department of Education, 1977.
• Educational Planning	Develop a positive self-image as a potential worker; develop appropriate career interest patterns based on self-awareness and vocational awareness; develop educational and vocational planning abilities.	Career exploration programs.	An area vocational school, a general high school, a control school with no vocational programs.	9th and 10th grade students.	Students from the area vocational school were better informed about career choice and demonstrated more positive attitudes toward their abilities and chances for vocational advancement as compared to students from the control school and the general high school. Changes in vocational interests were more closely related to grade level than to school programs. Parents of the vocational students were the most favorably impressed with the school's career exploration program.	Cochran, J. R., and Weis, D. M., 1972.
	Self-evaluation; explore broad occupational goals; awareness of economic, sociological, and social values of work; consideration of educational and training alternatives; development of decision-making skills related to other goals.	Career education, including hands-on activities, role playing, field trips, resource persons in classrooms, subject matter tie-ins; introduction to occupations in the community.	Cobb County Public Schools, Marietta, Georgia.	K-12 (over 500 students during a three year period).	Goals and objectives stated at program onset were achieved to a significant degree.	Comer, J., 1974.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Educational Planning (continued)	Awareness of academic majors; vocational opportunities and requirements; occupational information--training requirements, wages, advantages, disadvantages; interpretation and evaluation of aptitude and interests tests; discussion of effects of personal-social factors on vocational choice; making educational and vocational choices; goal setting.	Vocational counseling; individual, group, and programmed self-instruction.	Counseling and testing center at Southern Illinois University.	219 freshmen and sophomores seeking vocational counseling: 128 males and 91 females.	On all criteria, the three treatment groups' scores were significantly higher than the control group's in amount of assistance received. Clients in the programmed instruction treatment group received significantly more assistance than the clients in individual and group treatments in three areas: (1) being informed of vocational opportunities and requirements; (2) learning how to make educational decisions; and (3) setting up educational and vocational goals consistent with abilities, interests, and personality characteristics. In the other four areas--(1) becoming aware of the various academic majors; (2) interpreting aptitude and interest tests; (3) discussing how personal-social factors have an effect on vocational choice; and (4) discussing one's philosophy of life and values and their implications for vocational choice--no significant differences existed in the amount of assistance received among the three groups. The results suggest that the vocational-educational counseling by all treatments was reasonably effective in most of the areas investigated in this study. More important, however, is the finding that the programmed self-instruction approach proved superior to either the individual or group treatment on the three areas cited above, and was equal to the two other treatments on the remaining four areas studied.	Graff, R. W.; Danish, S.; and Austin, B., 1972.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
PERSONAL AND INTERPERSONAL WORK SKILLS • Self-Awareness	Exploration of career goals with an awareness of influence of sexism and stereotyping attitudes on occupational choices.	Curriculum model to reduce sex bias and sex role stereotyping in career exploration.	Montgomery Community College, Rockville, Maryland.	Male and female freshmen: 92 females, 115 males enrolled in an orientation course; n = 207.	No significant differences were found between the experimental and comparison groups on any of the criteria. No differences were found between groups in their Bem Sex Role Inventory scores, career saliency scores, the percentage of nontraditional occupational briefs selected or the evaluation briefs selected, or the evaluation of the occupational briefs selected. Sex differences were found on the Occupational Daydreams measure and on two questions of the evaluation form. Significant differences were found between males and females.	Blimline, C. A., 1976.
	Career education infusion and career maturation regarding self-appraisal occupational information, goal selection, planning, problem solving.	A planned cluster of diverse career-focused activities channelled through the Career Education Resource Center (CERCP), which houses and centralizes career services. Components are: career information, staff training, community involvement, instructional programs, assessment activities, and curricular preparation.	Large urban school system, Washington, D.C.	10th grade students aged 15-19 years, predominantly black, who scored in excess of 20 percentile points below the national norm in basic skills achievement.	Results indicated that treatment students were comparable to comparison students in every measured dimension. In one way, however, males differed from females: achievement of comparison males was lower than achievement for comparison females. The results support a very strong inference that the Career Education Resource Center Program positively influenced the career-related competencies of participants. Treatment males exceeded the comparison males on total Crites' Maturity Inventory (CMI) competency scores by over 13 points. Treatment females exceeded comparison females by over 6 points.	Career Education Resource Center Program (CERCP), 1979.
	Vocational exploration; self-concept.	Cooperative education program.	Fioretta H. LaGuardia Community College cooperative education program.	85 community college students in a work setting (internship). 99 community college students in a classroom setting; n = 184.	The internship may have had a greater impact than the classroom experience on perceptions of self, while the classroom experience may have had greater impact than the internship experience on perceptions of preferred occupation.	Ducat, D. E., 1980.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Self-Awareness (continued)	Vocational exploration; self-concept.	Cooperative education program.	Fioretta H. LaGuardia Community College cooperative education program.	85 community college students in a work setting (internship). 99 community college students in a classroom setting; n = 184.	The internship may have had a greater impact than the classroom experience on perceptions of self, while the classroom experience may have had greater impact than the internship experience on perceptions of preferred occupation.	Ducat, D. E., 1980.
	See Hamdani, A., 1977, School Attendance.					
	Improve skills and knowledge necessary for them to choose, advance in, and find satisfaction in adults roles.	Experience-based career education.	High school.	High school students	Effectiveness was demonstrated in growth in basic skills, career awareness, and interpersonal skills; student motivation was enhanced; community support was mobilized; graduates were prepared for college or work.	Chatham, K., 1975.
	See Cochran, J. R., and Weis, D. M., 1972, Educational Planning.					
	Career development; self-knowledge, isolate a career field; examine a course of study as a possible chosen career area.	Laboratory exploration, observation of mentors, working (internship) experience.	A & M Consolidated High School, College Station, Texas.	Gifted and talented students; n = 20.	Performances in the Career Education Measurement Services improved from the pre-Guidance Laboratory, to the post-internship administrations. A significant trials effect was found for certain sections of the Career Maturity Inventory: Attitude Scale and Planning and Problem-Solving sections of the Competency test. The researchers noted a significant decrease in scores for the Problem-Solving section of the Competency scale.	Colson, S., et al., 1979.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Self-Awareness (continued)	See Comer, J., 1974, Educational Planning.					
	Knowledge and skills in self-awareness and self-esteem, the world of work, and decision making.	Infusion at all grade levels; exposure to work experiences at the high school level.	Elementary and secondary schools.	Students in grades 4-12.	The sample of program students performed better in all categories of the locally developed Careers Test than did nonprogram students.	Hanson, B., 1978.
	Career exploration; self-awareness; skills to negotiate adult life successfully; career experiences.	Experience-based career education.	High school.	Students in grades 9-12 wanting career knowledge and exploration.	Results favored EBCE students in cognitive and affective areas. Parents and employers commented favorably. EBCE graduates supported the program and testified to its positive impact.	Henderson, H., 1975.
	Job requirements; self-knowledge; stereotypes.	Community-based career education.	Highline School District--three of five high schools.	80 Experimental and 100 control group high school students; n = 180.	The community-based career education program had a definite impact on the students' abilities to analyze conditions and requirements of occupations, but little or no impact on the students' increased understanding of positive and negative rewards associated with various types of work. The treatment of students demonstrated increased interest in and understanding of their own abilities. The community-based career education program had little or no impact on the actual selection of jobs stereotyped for the opposite sex.	Highline's Vocational Exploratory and Preparatory Program, 1978.
	See Kenyon, C.B., 1974, School Retention.					

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Self-Awareness (continued)	Perceptualization: self- and environmental orientations; conceptualization: directional choice and adaptive behavior; generalization: accommodation, satisfaction, mastery.	An intermediate career education course.	Four high schools.	734 pre-tested students; 611 post-tested students.	Statistically significant knowledge improvement was found.	Leton, D. A., 1975.
	Increase self-recognition of work potential and job satisfiers.	Vocational Exploration Group (developed by C. J. Daane), career education program.	4 or 5 school accreditation categories in Kansas; the largest school systems are not represented.	89 nonhandicapped students (39 males, 50 females); 54 physically impaired students (13 males, 41 females); EMR (IQ<85) were not included; n = 143	The data showed pre-, post- and delayed-test changes in favor of a self-report of more options. Significant increases were also found in aspirations that tended to reveal both self-confidence (leadership and supervision) and independence (money). The data also showed significant changes in the self-recognition of work potential. The pre- and delayed tests brought increases in the number of work areas considered personally relevant.	Neely, M. A., and Kosier, M. W., 1977.
	Career planning and decision making through assisting students to look at themselves and various career options.	Experience-based career education.	High schools.	Students in 11th and 12th grades.	Results favored experience-based students over control students in both cognitive and affective areas.	Nelson, R., 1979.
	Increased self-appraisal, occupational information, goal selection, planning, and problem solving.	Coordinated activities in Career Education Resource Center, classroom, and community.	High school.	Low-achieving urban 10th graders.	Significant gains for participants were reported in self-appraisal, occupational information, goal selection, planning and problem solving. Treatment males exceeded control males by 13.8 points. Treatment females exceeded control females by 6.4 points. Scores for both males and females are significant at or beyond .002.	Page, E., 1980.

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THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Self-Awareness (continued)	Self-knowledge-intelligence and interests.	Computer-based vocational exploration.	High school.	11th grade males; n = 128.	Measures of self-knowledge showed increased accuracy about intelligence, but not about interests, after treatments that included the feedback. Increases were largely due to changes in subjects who originally underestimated their intelligence. A delayed posttest indicated that the increases did not persist.	Pilato, G. T., and Myers, R. A., 1973.
	See Quinn, M., 1973, Learning-Study Skills.					
	See Shively, J. E., and Davis, C. S., 1979b, in Learning-Study Skills.					
• Interpersonal and Life Skills	See Spotts, R., and Evenson, J., 1977 Learning-Study Skills.					
	See Chatham, K., 1975, Self-Awareness.					
	See Hagans, R., 1975, Academic Performance.					

APPENDIX A (CONTINUED)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Interpersonal and Life Skills	See Muse, I. D., and Coombs, G., 1977, Basic Skills.					
	See Peterson, R., 1975, Academic Performance.					
• Work Values	See Career Education: Planning, Learning, Understanding, and Succeeding (CE+), 1977, Basic Skills.					
	See Comer, J., 1974, Educational Planning.					
	Career Development.	Career Development Seminar.	College.	24 experimental and 22 control group undergraduate college students; n = 46.	Seminar participants evidenced significant improvement over control students on four of the six scales of Crites' Career Maturity Inventory. The seminar participants viewed work as a more important aspect of life, became more personally involved in the career choice process, and grew more independent in decision making as compared to control students.	Ganster, D. C., and Lovell, J. E. 1978.
	See Handler, L., et al., 1978, School Attendance.					
	Job skills (occupational survival skills); positive attitudes toward employment.	Occupational Survival Skills Modules (classroom).	High school.	High school students.	The variables of amount of work experience, work plans, and educational plans were found to bear significant relationships to attainment of occupational survival skills. Significant relationships were found between students' attitudes toward employment and the variables of grade level, sex, work plans, and educational plans.	Leach, J. A., 1978.

APPENDIX A (CONTINUED)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Work Values (continued)	See Topougis, N., 1978, Learning-Study Skills.					
PREPARATION FOR CAREERS	See Career Education: Planning, Learning, Understanding, Succeeding (CE+), 1977, Basic Skills.					
	See Hamdani, A., 1977, School Attendance.					
	See Leach, J. A., 1978, Work Values.					
	See Mattison, W.H., 1979, Basic Skills.					
	See Public Service Administration Internship Program in Career Education, 1978, Academic Performance.					

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
PREPARATION FOR CAREERS (continued)	Career decision-making skills; educational and training decisions; job-seeking skills; job-keeping skills.	Guidance Information System--occupational, armed services occupational, two-year college, four-year college, financial aid, graduate school. (computer-based).	Public secondary schools and various community agencies in Maine.	High school students and agency participants.	Conclusions were drawn as follows: a) Users understood the purpose of Guidance Information System (GIS) and had no trouble in using the GIS guide and summary sheet. b) The system was interesting and motivational to users. c) GIS was most effective in providing occupation and career information. d) GIS had an impact on educational decision making, more so for public school than agency users. e) GIS was not designed to develop job-seeking skills or job-keeping skills, but was perceived by some as aiding them. f) GIS was not designed to develop self-understanding and awareness, but utilized dimensions of the self in guiding the search process. g) GIS stimulated a degree of change in guidance programs and in the role of the counselor.	Ryan, C. W., et al., et al., 1980
	Job-seeking interview skills.	Model exposure; role playing; model exposure plus role playing; model exposure and role playing with video feedback.	Prison--Prerelease and Aftercare Center, Greensboro, North Carolina.	Male subjects in 3 prerelease training cycles; age range 18-47 years; mean age of 26 years; n = 56.	Both the model exposure plus role playing (MRP) and the model exposure and role playing with video feedback (video) treatments were significantly greater than the control procedure on all dependent variables. The role playing (RP) treatment was more effective than the control procedure on two criteria; the model exposure group and the model exposure plus role playing group differed significantly on one criterion. On follow-up ratings, the model exposure and role playing group differed significantly from the control group on one variable, while the video group differed significantly on three areas of behavior and on probability of hire.	Speas, C. M., 1979.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
PREPARATION FOR CAREERS (continued)	See Stead, F. L., and Hartnett, R. A., 1978, Academic Performance.					
	See Career Education: Planning, Learning, Understanding, Succeeding (CE+) 1977, Basic Skills.					
	See Chatham, K., 1975, Self-Awareness.					
	Employability and work adjustment; increased knowledge of world of work; decision making.	Program to supplement the 9th and 10th grade components of the Ohio Development Program.	Secondary schools in six Ohio districts: Akron, Boardman Local, Dayton City, Kirtland Local, Lorain City, Minford Local.	9th and 10th grade students.	Students in the intensified program displayed more career-related learning in developmental areas, especially cognitive learning.	McCauley, L. D., and Rusling, D. E., 1979.
	See Quinn, M., 1973, Learning-Study Skills.					
• Career Implementation Skills and/or Employability Skills (continued)	Vocational development and improved school adjustment.	Work Experience and Career Exploration Program (WECEP).	Waukegan Public School District, Waukegan, Illinois (three junior high schools and two high schools).	Junior high and high school students identified as potential dropouts.	The career education program was significantly related ($p < .05$) to increase in the measured vocational maturity of potential dropouts. Evidence regarding the effectiveness of the career program in reducing proportions of students dropping out of school was not conclusive. There was an increase in the number of days of school attendance ($p < .01$) for potential dropouts enrolled in this career education program. There was a decrease in the number of disciplinary referrals ($p < .01$) for	Schmidt, W. I., and Dykeman, B. F., 1979.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Career Implementation Skills and/or Employability Skills (continued)					potential dropouts enrolled in this career education program. The results as to the relationship between the career education program and the improvement of grade point average were not conclusive.	
	See Speas, C. M., 1979, Vocational Skills or Work-related Skills.					
	Vocational exploration; obtain full-time jobs after graduation; complete high school.	Vocational Exploration in the Private Sector program (counseling, support services, work experience, assistance in locating full-time jobs).	High school in 7 cities.	Dropout-prone Neighborhood Youth Corps young people n = 716.	Neighborhood Youth Corps student enrollees exhibited the following findings: 91.1 percent remained in school or graduated; 53.9 percent completed the full year program; 48.8 percent missed fewer days of school than the previous year. Improved grade-point average was experienced by 62.0 percent of program completers as compared to previous year. Of 179 seniors who completed the Vocational Exploration program, 71.5 percent continued their employment, 9.5 percent continued their education, 4.5 percent joined the military, 10.6 percent were not working after graduation, and 2.8 percent were married.	Sprengel, D. P., and Tomey, E. A., 1974.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
• Career Implementation Skills and/or Employability Skills (continued)	See Stead, F. L., and Harmett, R. A., 1978, Academic Performance.					
CAREER PLANNING SKILLS	Career information-seeking behaviors.	Group reinforcement counseling.	University of Missouri/Columbia.	Male college freshmen and sophomores; n = 94.	Group reinforcement counseling and vocational consistency were significantly related to behavior change. A positive relationship exist between the use of group reinforcement counseling and an increase in career information-seeking responses. A relationship was found to exist between Holland's Vocational consistency-inconsistency Vocational Preference Inventory paradigm and information-seeking response; namely, consistent subjects tended to increase their exploratory behavior as a result of counseling more than vocationally inconsistent subjects.	Aiken, J., and Johnston, J. A., 1973.
	Decision-making skills.	Three different counseling procedures; group social models, structured interaction, and wait control group.	Three high schools in Evanston, Illinois.	Male, 11th grade students enrolled in a course in vocational experience for entering world of work; n = 40.	No significant differences were found among the groups regarding the major hypothesis of the study--that students assigned to the three experimental group counseling procedures would carry out more career decision-making behaviors as measured by the five questionnaires than would students assigned to the control group.	Bergland, B. W.; Quatrano, L.A.; and Lundquist, G. W., 1975.
	To analyze the effect of giving occupational information to decided and undecided students.	Vocational information versus "no-information."	Texas Tech University.	College students enrolled in introductory Psychology courses; 36 males and 57 females; 60 freshmen, 21 sophomores, 6 juniors, 6 seniors. n = 93.	No significant differences were found between "undecided" students and "decided" students as a result of the vocational information they were given.	Cesar, J. P.; et al., 1982.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER PLANNING SKILLS (continued)	See Cochran, J. R., and Weis, D. M., 1972, Educational Planning.					
	See Colson, S.; et.al., 1979, Self-Awareness.					
	See Comer, J., 1974, Educational Planning.					
	Career decision making.	Project BITE (Business, Industry, Training, Education).	Two inner-city high schools in the Inglewood (California) Unified School District.	29 BITE students, 50 control group students. n = 79.	The average Business, Industry, Training, Education (BITE) student raised his/her score on both the attitude and competency scales by twenty percentage points during the semester, the average control student increased his/her score by one-half of one percentage point during the semester.	The Effect of Career Awareness, 1978.
	Career maturity.	Short-term counseling.	High school.	Experimental group was 17 tenth-grade students.	Analysis of variance revealed a statistically significant interaction with both the Self-Appraisal subscale scores and total scale scores. Career maturity as a developmental process could be measured and facilitated through counseling.	Flake, M. H.; Roach, A. J., Jr. and Stenning, W. F., 1975.
	See Graff, R. W.; Danish, S.; and Austin, B., 1972, Educational Planning.					

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER PLANNING SKILLS (continued)	See Hagans, R., 1975, Academic Performance.					
	See Hamdani, A., 1977, School Attendance.					
	See Hanson, B., 1978, Self-Awareness.					
	Realistic vocational choice.	Individual and group counseling.	A rural midwestern consolidated high school.	11th and 12th grade boys with unrealistic vocational plans; n = 60.	"Overshooters" who had participated in group counseling and "undershooters" who were individually counseled showed marked movement toware more realistic choices when compared to the control group. Undershooters who participated in group counseling and overshooters who received individual counseling did not show similar significant improvement in realism when compared with the control group.	Hanson, J. T., and Sander, D. L., 1973.
	Effects of self-directed search--career decision making.	Self-Directed Search--structured or unstructured and with or without Occupations Finder booklet.	High school.	High school females, n = 104.	After taking the Self-Directed Search, students obtained more options and engaged in more information seeking.	Holland, J. L.; et al., 1978.
	Career maturity; career decision making.	Course on career decision-making skills.	Six high schools.	11th grade academic and nonacademic students; n = 337.	Career decision course seemed to be more effective with the noracademic groups. Career maturity and I.Q. had a moderately high relationship to career decision making.	Jackson, D. J., and Egner, J.R. 1976.
	Career maturity.	Career education program through social studies and language arts courses.	Rome, Georgia high schools.	10th grade students in career education program in social studies and language arts courses.	Student evaluations revealed that students perceived that their teachers discussed careers principally in their language arts and social studies classes and that there was an active involvement and support of career education on the part of teachers, counselors, and through school programming. Career Maturity Inventory results showed evidence of support	Jennings, G. D.; et al., 1976.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR-DATE
CAREER PLANNING SKILLS (continued)					of a positive effect of the career education program on tenth-graders' career maturity.	
	Career decision making; to test the effectiveness of the self-directed search; to test the validity of hypothesis the career indecision and indecisiveness are differentially related to anxiety and vocational maturity.	Self-Directed Search, Taylor Manifest Anxiety Scale, Attitude Scale of the Career Maturity Inventory.	A large urban high school in the metropolitan New York City area.	12th grade students, 66 males, 60 females; n = 126.	From 50 percent to 60 percent of those using the Self-Directed Search could arrive at a career choice without the aid of a counselor.	McGowan, A. S., 1978.
	Vocational decision making.	Individual counseling or Computerized Vocational Information System (CVIS).	High school.	Top 54 and bottom 54 high school sophomores from a class of 853 selected on basis of Educational Development series test scores; n = 108.	The prediction that high-readiness subjects would change more with a computerized vocational information system (CVIS) was not confirmed. The prediction that low-readiness subjects would change more with counseling was confirmed. The groups did not differ in satisfaction with their post-treatment vocational choices. Findings suggested that individual counseling be emphasized with low-readiness clients when both options are available.	Melhus, G. E., Hershenson, D. B., and Vermillion, M. E., 1973.
	Career exploration-variety and frequency of information-seeking behaviors	Peer Social Modeling. Videotape only; videotape and reinforcement; videotape, reinforcement, and stimulus materials; stimulus and reinforcement materials.	Two high schools in a rural university community.	9th grade females; n = 216.	Peer social modeling was related to increasing both the variety and frequency of information-seeking behaviors. A counseling group using modeling, positive reinforcement, and overt practice of the modeled behaviors with stimulus materials was more likely than the other treatment conditions investigated to provide an increase in the variety and frequency of information-seeking behavior among 9th grade girls.	Motsch, P., 1980.

THEME	CLIENT OBJECTIVES	INTERVENTIONS/STRATEGY	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER PLANNING SKILLS (Continued)	Planning skills; knowledge of resources for planning; decision-making skills.	Educational and Career Exploration System--a computer-based educational and occupational exploration system (ECES).	Secondary schools in Genesee County, Michigan.	Tenth-grade students, 376 males, 415 females with usable pretests and posttests who used ECES; 718 males, 738 females from control schools with usable pretests and posttests; n = 2,247.	Adjusted means on the Career Development Inventory (CDI) were significantly larger for users of the Educational and Career Exploration System (ECES). There were larger gains in terms of choice and use of resources for occupational exploration for users. Compared with controls, ECES users showed significantly larger gains in both degree of planning orientation and in choice and use of resources for occupational exploration, but not in information and decision making. The use of ECES in conjunction with the regular guidance program had relatively small but clearly positive effect in promoting aspects of vocational maturity as measured by Career Development Scales A and B.	Myers, R. A.; et al., 1975
	See Neely, M. A., 1979, Learning-Study Skills.					
	See Nelson, R., 1979, Self-Awareness.					
	See Omvig, C. P., 1979, Academic Performance.					
	See Page, E., 1980, Self-Awareness.					
	Increase occupational exploration and congruence between occupational preferences and measured interests.	Report of vocational interest scores and small group sessions on vocational planning.	Three high schools in and near St. Louis, Missouri.	9th grade females with average or above academic ability were randomly assigned to intervention group; or control group. n = 390.	The intervention stimulated occupational exploration and increased congruence between occupational preferences and measured interests. Outcomes differed according to interest type, thus suggesting that certain students may need more counselor attention than others.	Prediger, D. J., and Noeth, R. J., 1979

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER PLANNING SKILLS (Continued)	Career information.	Computer-based career exploration (CHOICES) and Self-Directed Search (paper and pencil).	College	College students - 17 males, 58 females, 59% freshmen, 24% sophomores, 11% juniors, 6% others; n = 75	Results indicated a user preference for CHOICES, an interactive computer-based career guidance program, over the Self-Directed Search, although both programs received positive ratings. No data were given regarding which program provided more information.	Reardon, R. C.; Bonnell, R. O., Jr.; and Huddleston, M. R., 1982.
	Career decision making.	Rational vs. intuitive (simulated method--Guided Design vs. several exercises from Decisions and Outcomes).	An urban, commuter, open-admissions community college.	Full-time day-session undergraduate freshmen; n = 120	Those students participating in the two experimental groups significantly increased their vocational choices. Rational decision makers did best with the rational intervention, whereas intuitive decision makers did best with the intuitive interventions. Thus, both styles can be considered effective. Dependent decision makers had an ineffective style, demonstrating decreases on both dependent measures in all groups.	Rubinton, N., 1980
	Career decision making.	Computer-assisted guidance program and counselor aid.	Santa Fe Community College, Gainesville, Florida.	Community college students; n = 124	Students found the program to be helpful in decision-making skills. It was most effective when combined with structured counselor intervention.	Sampson, J. P. and Stripling, R. O., 1979.
	Vocational maturity.	Career group experience.	College		Students significantly increased their vocational maturity as a result of the group experience. Within experimental groups, inconsistent and non-differentiated students improved maturity measures than consistent or differentiated students.	Schenk, G. E.; Johnston, J. A.; and Jacobsen, K., 1979.

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER PLANNING SKILLS (Continued)					Students who were both inconsistent and non-differentiated showed consistently greater increases on virtually all vocational maturity measures than all other theoretical groups.	
	Career knowledge; career planning; reading comprehension; math concepts; math applications.	Experience-based career education.	High Point, North Carolina schools.	EBCE and non-EBCE students.	An analysis of demographic data showed that in the comparison group non-EBCE students), there were more females, more whites, better educated parents, and more fathers employed in professional/administrative occupations. Analysis of scores on standardized basic skills tests indicated that EBCE students did as well as comparison students on reading comprehension and math concepts; and comparison students did significantly better than EBCE students on math applications. Analysis of scores on Part 2 of the Student Attitude Survey battery indicated that ECBE students did not acquire significantly greater mastry in career knowledge nor in career planning. Parent and employer survey data indicated that both groups were positive toward the program.	Shively, J. E., and Davis, C. S., 1979a.
	See Shively, J. E., and Davis, C. S., 1979b, Learning-study Skills.					

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR-DATE
CAREER PLANNING SKILLS (Continued)	Assessment of vocational strengths and weaknesses; assessment of educational strengths and weaknesses; tutorial or support services to enter and complete a vocational program; career exploration; career decision making; career planning.	Seeking Alternative Vocational Education (SAVE); self-awareness activities; training workshops; one-to-one formal counseling and guidance sessions.	Mohave County School District, Arizona--three locations: • Bullhead • Kingman • Lake Harasu.	High school students (freshmen to seniors); disadvantaged--dropouts and potential dropouts; n = 394.	Future educational goals were improved. Increases were noted in the percentage of students planning to graduate from high school and college; to attend business/trade school; to work full-time and take night classes; to learn a trade in military; and to complete a G.E.D. A decrease was found in the percentage responding as "undecided." Project SAVE was considered by 93.7 percent of the students as helpful in keeping them in school.	Sisco, W. M., 1980.
	See Spotts, R., and Evenson, J., 1977, Learning-Study Skills.					
	See Stead, F. L., and Hartnett, R. A. 1978, Academic Performance.					
	See Van Dusseldorp, R. A., 1978, Self-Awareness.					
	Career decision making.	Hunt's Matching Model paradigm.	Two Iowa high schools.	High school juniors; n = 35.	Group format was related to the criteria of choice basis complexity in career decisions for the high-conceptual-level students only. No significant interaction or main effects were obtained for attitudes toward career decisions and planning activity. High-conceptual-level students in simulation groups scored higher on choice basis complexity than those in the experimental groups.	Warner, S. G. and Jepsen, D. A., 1979.
	Achieve preselected goals in vocational counseling.	Three group counseling methods.	College.	Freshman college students; 28 males; 29 females; n = 57.	During the first four weeks of the study, the test interpretation-occupational information group made rapid progress and reported more learning on chosen goals than on goals not chosen ($p < .05$). The case study group and the control group	Westbrook, F. D., 1974.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER PLANNING SKILLS (Continued)					reported no significant learning. The occupational information-test interpretation group reported more learning than the latter groups, but less than the former group, and the difference was not significant. By the end of the counseling program, the test interpretation-occupational information group and the control group reported no significant learning between chosen goals and goals not chosen, the occupational information-test interpretation group and the case study group reported significantly learning, $p < .05$ and $p < .01$, respectively.	
	See Zytowski, D. G., 1977, Self-Awareness.					
CAREER AWARENESS/ EXPLORATION	Career decision making.	Group counseling; 3 group approaches: all women, half men - half women, control.	Binghamton North High School.	Male and female 11th grade students, 20 women, 12 men n = 32	Women in an all-women's group were better able to make career decisions than women in a sexually mixed group.	Brenner, D., and Gazda-Grace, P. A., 1979.
	Knowledge of job factors.	Vocational exploration, Vocation exploration without interaction, wait control.	A junior high school, Denver, Colorado.	Male Mexican-American 9th grade students; n = 30	There were no significant differences among groups (α = .05). The treatment group means were larger than the control means for every question. All of the treatment subjects felt the experience was helpful and would recommend it to other students.	Bergland, B. W. and Lundquist, G. W., 1975.
	See Blimline, C. A., 1976, Self-Awareness.					

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR-DATE
CAREER AWARENESS/ EXPLORATION	See California State Department of Education, 1978, Career Planning Skills.					
	See Career Education Resource Center Program (CERP), 1979, Self-Awareness					
	See Career Guidance for Indian Youth, 1976, School Retention.					
	See Cesar, J. P.; et al., 1982, Career Planning Skills.					
	See Chatham, K., 1975, Self-Awareness.					
	See Cochran, J. R., and Weis, D. M., 1972, Educational Planning.					
	See Col[illegible], D.; et al., 1979, Self-Awareness.					
	See Comer, J., 1974, Educational Planning.					

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER AWARENESS/ EXPLORATION (Continued)	Career exploration.	Career exploration utilizing a mobile career exploration center.	Des Moines Area Community College District.	Students in rural school systems; n = 323	Participants tended to enter postsecondary education at a substantially higher rate than controls; the rate of entering the same area of employment or continuing education as stated occupational preference was nearly equal for the two groups and was much higher than the rate for the highest interest score outcomes; participants had a lesser tendency to switch educational program enrollment or employment within six months or graduation.	Community College and Local Rural Secondary Schools, Cooperative Career Assessment and Exploration Program, 1975.
	See Crawford, G., and Miskell, C., 1978, Learning-Study Skills.					
	See Crusey, C., 1979, Learning-Study Skills.					
	See Ducat, D. E., 1980, Self-Awareness.					
	Evaluation Report for Career Education Strategies, 1975, Career Planning Skills.					
	Career maturity and Career awareness.	Career education program.	Eight selected Texas school districts.	Students and staff members in pilot career education classes; different grade levels.	By level and location groups, means and gains were near the same levels and showed varying levels of significance. When all schools were considered together, there were statistically significant gains on combined parts of each measure. It was concluded that, on the whole, the program produced significant gains in career education and the well-developed career education programs could be transported	Evaluation Report for Career Education Strategies, 1975.

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER AWARENESS/ EXPLORATION (Continued)					and installed on a regionwide basis with student gains in career awareness and career maturity probable through intervention.	
	See Experience-Based Career Education, 1978, Basic Skills.					
	See Experience-Based Career Education Project, 1982, Learning-Study Skills.					
	Vocational maturity.	Career Planning Experience--group discussion, testing, individual counseling.	Two county and two state Massachusetts correctional institutes.	Inmates; n = 90	A short, individualized vocational counseling program significantly raised the vocational maturity level of an inmate population.	Feldman, S. H., and Marinelli, R. P., 1975.
	Vocational evaluation.	Singer Vocational Evaluation System.	Monroe County, New York SS/VR Project (Social Service/ Vocational Rehabilitation).	55 handicapped and 70 disadvantaged students; 81 males and 44 females; n = 125.	The generally positive outcomes support the experimental hypotheses. The results of this study reinforced the findings of the 1976 study. The Singer Vocational Evaluation System (VES) has demonstrated relatively strong predictive validity in use with handicapped and disadvantaged individuals receiving vocational evaluation services at the Monroe County Social Service Vocational Rehabilitation Project.	Gannaway, T. W., Sink, J. M.; and Becket, W. C., 1980.
	Career exploration.	Career exploration courses with 4 major components: self-awareness, career awareness, decision making, career planning.	Counseling center at Central Michigan University.	College freshmen and sophomores; n = 115.	The course helped the majority of students to make better career decisions.	Gillingham, W. H., and Lounsbury, J., 1979.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER AWARENESS/ EXPLORATION (continued)	Career maturity; career competencies.	Curricula, guidance and counseling, placement.	Junior and senior high schools.	Junior and senior high school students; n = 531.	The experimental career education program appeared to increase effectively the maturity of career attitudes and to foster gains on career competencies as measured by the Career Maturity Inventory competency tests.	Greene, S. D., 1973.
	See Hamdani, A., 1977, School Attendance.					
	Career maturity.	Career education program through social studies and language arts courses.	Rome, Georgia High schools.	10th grade students in career education program in social studies and language arts courses.	Student evaluations revealed that students perceived that their teachers discussed careers principally in their language arts and social studies classes and that there was an active involvement and support of career education on the part of teachers, counselors, and through school programming. Career Maturity Inventory results showed evidence of support of a positive effect of the career education program on tenth-graders' career maturity.	Jennings, G. D.; et al., 1976.
	See Henderson, H., 1975, Self-Awareness.					
	See Highline's Vocational Exploratory and Preparatory Program, 1978, Self-Awareness.					
	Career Information.	Pre-postsecondary program (career exploration program) in health and social science classes.	Four Ohio secondary schools.	11th and 12th grade students.	General achievement was the same as for regular high school courses. In addition, information was provided regarding specific occupations.	Kent State University, 1975.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER AWARENESS/ EXPLORATION (continued)	See Kershner, K. M., and Blair, M. W., 1975, Basic Skills.					
	Broaden career options; stimulate exploratory behavior.	Non-Sexist Vocational Card Sort (standard and revised forms); Self-Directed Search (standard and revised forms).	College.	Undergraduate women -- 85% sophomores, 15% freshmen -- describing themselves as uncertain about their vocational future and as interested in participating in a program of career exploration. n = 198.	The Non-Sexist Vocational Card Sort (NSVCS) suggested a broader range of career alternatives to the participants than did the Self-Directed Search (SDS). The results seem to indicate that the SDS experiences yielded a more stereotypical set of suggested occupations than the NSVCS experiences, and probably reflected the socialization experiences of the students more accurately. The NSVCS experiences tended to suggest wider opportunities than those to which participants had already been exposed. In terms of stimulating career information-seeking behaviors, either self-reported or observed, no significant differences were found among the groups.	Lawler, A. C., 1979.
	See Mattison, W. H., 1979, Basic Skills.					
	See Motsch, P., 1980, Career Planning Skills.					
	See Muse, I. D., and Coombs, C. G., 1978, Basic Skills.					
	See Nelson, R., 1979, Self-Awareness.					

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER AWARENESS/ EXPLORATION (Continued)	Increase experience base and heighten awareness of kinds of work for which students' abilities and interests suit them.	Project Discovery Materials.	School.	368 students at four schools.	The greater the group mean for Project Discovery materials explored, the greater the mean change on all scales of the Mature Assessment of Discovery Exploration.	Olive, P. A., 1978.
	See Omvig, C. P., 1979 in Academic Performance.					
	Career awareness and attitudes.	Career Education in the Arts Program.	High school.	Gifted and talented students. 18 females; 7 males; n = 25.	In both the pre-tests and post-tests, students showed fairly favorable attitudes toward themselves, the arts, and the world of work in the arts. Students showed many positive changes in cognitive items that dealt with knowledge about work in the arts and career decision making. Students' attitudes toward the program were very positive as determined through talks at job sites. Through the questionnaire, it was found that slightly over half the students felt that students who participate in the program could expect to gain enough knowledge to make a final decision about pursuing a career in the arts.	Paul, R. H., 1977.
	See Peterson, R., [illegible]5, Academic Performance.					
	See Prediger, D. J., and Noeth, R. J., 1979, Career Planning Skills.					
	See Rolle, G. F., Sr., et al., 1977, Career Planning Skills.					

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER AWARENESS/ EXPLORATION (continued)	See Shively, J. E., and Davis, C. S., 1979b, Learning-Study Skills.					
	See Thomas, H. B., et al., 1980, Self-Awareness.					
	Vocational exploration.	Four career exploration approaches.	High school.	High school seniors; n = 168	All approaches, except for the cluster approach, produced an improvement in final test scores. The cluster approach obtained the poorest comparative results among the four approaches studied. The second approach, the Career Maturity Inventory, was found to be somewhat lower in tested effectiveness than both the Self-Directed Search and the Career Survey-Vocational Preference Inventory. There was no significant difference found when the Self-Directed Search was compared to the Career Survey-Vocational Preferance Inventory.	Wiggins, J. D., and Moody, A., 1981.
	Broaden students' consideration of various occupations.	Self-Directed Search (SDS).	Four high schools.	Students in 10th, 11th, and 12th grades; n = 1092.	Both versions of the Self-Directed Search were effective in increasing the number of occupations being considered. However, students in Group I, using the published version, considered more appropriate occupations based on their activities, competencies, interests, and self-ratings than those who took the non-self-directed version (Group II). Both versions of the Self-Directed Search were effective in increasing satisfaction and certainty about vocational plans. The effectiveness of both versions was evaluated as moderately positive by the students.	Zener, T. B., and Schnuelle, L., 1972.

APPENDIX A (Continued)

THEME	CLIENT OBJECTIVES	INTERVENTIONS	SETTINGS	POPULATIONS	OUTCOMES	AUTHOR - DATE
CAREER AWARENESS/ EXPLORATION (continued)	Consider occupational alternatives.	Vocational Preference Inventory (VPI) and Self-Directed Search (SDS).	High schools.	High school students.	Students in either the Vocational Preference Inventory or the Self-Directed Search groups were found to be considering more occupational alternatives and were more satisfied with their current occupational choices than were students in the control group. The Self-Directed Search group reported less of a need to see a counselor than did students in either the Vocational Preference Inventory or control groups. Overall, although there were differences between the Vocational Preference Inventory and Self-Directed Search groups, the more surprising finding was the relatively minor difference between the two groups.	Zener, T. B., and Schnuelle, L., 1976.

APPENDIX B

STUDIES GROUPED BY

CAREER GUIDANCE INTERVENTION

STUDIES GROUPED BY CAREER GUIDANCE INTERVENTION

Intervention	Studies
Counseling	*Aiken, J., and Johnston, J.A., 1973 *Bergland, B.W.; Quatrano, L.A.; and Lundquist, G.W., 1975 *Brenner, D., and Gazda-Grace, P.A., 1979 *Campbell, R.B., 1981 *Career Guidance for Indian Youth, 1976 *Feldman, H.S., and Marinelli, R.P., 1975 *Flake, M.H.; Roach, A.J., Jr.; Stenning, W.F., 1975 *Graff, R.W.; Danish, S.; and Austin, B., 1972 *Greene, S.D., 1973 *Hanson, J.T., and Sander, D.L., 1973 *Melhus, G.E.; Hershenson, D.B.; and Vermillion, M.E., 1973 *Prediger, D.J., and Noeth, R.J., 1979 *Rhode island Department of Education, 1979 *Serednesky, G.; Cahill, L.; and Engelhart, C.I., 1974 *Sisco, W.M., 1980 *Speas, C.M., 1979 *Sprengel, D.P., and Tomey E.A., 1974 *Stoker, J., 1979 *Westbrook, F.D., 1974 *Whyte, C.B., 1978
Classroom Activities	*Blimline, C.A., 1976 *California State Department of Education, 1978 *Campbell, R.B., 1981 *Career Education; Planning, Learning, Understanding, and Succeeding (CE +), 1977 *Career Education Resource Center Program (CERCP), 1979 *Career Guidance for Indian Youth, 1976 *Cesar, J.P.; et al., 1982 *Comer, J., 1974 *Evans, J.R., and Rector, A.P., 1978 *Experience-based Career Education, 1978 *Greene, S.D., 1973 *Hamdani, A., 1977 *Hanson, B., 1978 *Holmes, D.H., 1979 *Jackson, D.J., and Egner, J.R., 1976 *Jennings, G.D.; et al., 1976 *Kent State University, 1975 *Kenyon, C.B., 1974 *Kershner, K.M., and Blair, M.W., 1975 *Leach, J.A., 1978 *Leton, D.A., 1975

STUDIES GROUPED BY CAREER GUIDANCE INTERVENTION
(Continued)

Intervention	Studies
Classroom Activities (Continued)	*Olive, P.A., 1978 *Omvig, C.P., 1979 *Page, E., 1980 *Paul, R.H., 1977 *Phode Island Department of Education, 1979 *Rolle, G.F., Sr.; et al., 1977 *Stoker, J., 1979 *Thomas, H.B.; et al., 1980 *Whyte, C.B., 1978
Computer-based Programs	*Cochran, D.J.; et al., 1977 *Melhus, G.E.; Hershenson, D.B.; and Vermillion, M.E., 1973 *Myers, R.A.; et a;., 1975 *Pilato, G.T., and Myers, R.A., 1973 *Reardon, R.C.; Bonnell, R.O., Jr.; and Huddleston, M.R., 1982 *Risser, J.J., and Tulley, J.E., 1977 *Ryan, C.W.; et al., 1980 *Sampson, J.P., and Stripling, R.O., 1979
Placement	*Greene, S.D., 1973 *Sprengel, D.P., and Tomey, E.A., 1974
Seminars and Workshops	*Career Guidance for Indian Youth, 1976 *Ganster, D.C., and Lovell, J.E., 1978 *Terranova, C., 1976
Experience-Based Career Education	*Carey, M.A., and Weber, L.J., 1979 *Chatham, K., 1975 *Conecuh Couty Experience-Based Career Education, 1977 *Crawford, G., and Miskell, C., 1978 *Experience-Based Career Education, 1978 *Experience-Based Career Education Project, 1982 *Hagans, R., 1975 *Handler, L.; et al., 1978 *Henderson, H., 1975 *Highline's Vocational Exploratory and Preparatory Program, 1978 *Maguire, L., 1975 *Mattison, W.H., 1979

STUDIES GROUPED BY CAREER GUIDANCE INTERVENTION
(Continued)

Intervention	Studies
Experience-Based Career Education (Continued)	*McClure, L., 1975 *Muse, I.D., and Coombs, C.G., 1978 *Muse, I.D., and Coombs, C.G., 1977 *Neely, M.A., 1979 *Nelson, R., 1979 *Parkway Experience- ased Career Education, 1977 *Peterson, R., 1975 *Quinn, M., 1973 *Shively, J.E., and Davis, C.S., 1979a *Shively, J.E., and Davis, C.S., 1979b *Spotts, R., and Evenson, J., 1977 *Stead, F.L., and Hartnett, R.A., 1978 *Van Dusseldorp, R.A., 1978 *Wyoming State Department of Education, 1977
Cooperative Education	*Ducat, D.E., 1980
Employer-based Career Education	*Sanders, J.H., and Bertram, C.L., 1973
Alternative Career Education	*Kenyon, C.B., 1974 *Shively, J.E., 1975 *Smith, G., 1975
Career and Vocational Exploration Techniques	*Bergland, B.W., and Lundquist, G.W., 1975 *California State Department of Education, 1978 *Career Education Resource Center Program (CERCP), 1979 *Career Guidance for Indian Youth, 1976 *Cochran, J.R., and Weis, D.M., 1972 *Colson, S.; et al., 1979 *Community College and Local Rural Secondary 1975 *Crusey, C., 1979 *The Effect of Career Awareness, 1978 *Experience-Based Career Education Project, 1982 *Feldman, H.S., and Marinelli, R.P., 1975 *Gannaway, R.W.; Sink, J.M.; and Becket, W.C., 1980 *Gilligham, W.H., and Lounsbury, J., 1979

STUDIES GROUPED CAREER GUIDANCE INTERVENTION
(Continued)

Intervention	Studies
Career and Vocational Exploration Techniques (Continued)	*Hanson, B., 1978 *Holland, J.L.; et al., 1978 *Jackson, D.J., and Egner, J.R., 1976 *Kent State University, 1975 *Kenyon, C.B., 1974 *Kershner, K.M., and Blair, M.W., 1975 *Lawler, A.C., 1979 *McCauley, L.D., and Rusling, D.E., 1979 *McGowan, A.S., 1977 *Neely, M.A., and Kosier, M.W., 1977 *Page, E., 1980 *Prediger, K.J., and Noeth, R.J., 1979 *Public Service Administration Internship Program in Career Education, 1978 *Rolle, G.F., Sr.; et al., 1977 *Rubinton, N., 1980 *Schenk, G.E.; Johnston, J.S.; and Jacobsen, K., 1979 *Schmidt, W.I., and Dykeman, B.F., 1979 *Serednesky, G.; Cahill, L.; and Engelhart, C.I., 1974 *Sisco, W.M., 1980 *Sprengel, D.P., and Tomey, E.A., 1974 *Topougis, N., 1978 *Warner, S.G., and Jepsen, D.A., 1979 *Wiggins, J.D., and Moody, A., 1981 *Zener, T.B., and Schnuelle, L., 1972 *Zener, T.B., and Schnuelle, L., 1976 *Zytowski, D.G., 1977

APPENDIX C

STUDIES GROUPED BY

CAREER GUIDANCE POPULATIONS

STUDIES GROUPED BY CAREER GUIDANCE POPULATIONS

Population	Studies
Secondary and Postsecondary Level Students (Grades 9-14)	o Rural *Community College and Local Rural Secondary Schools, 1975 o Inner-City and Disadvantaged *Career Education Resource Center Program (CERCP), 1979 *Gannaway, T.W.; Sink, J.M.; and Becket, W.C., 1980 *Holmes, D.H., 1979 *Mattison, W.H., 1979 *Melhus, G.E.; Hershenson, D.B.; and Vermillion, M.E., 1973 *Page, E., 1980 *Rolle, G.F., Sr.; et al., 1977 *Sisco, W.M., 1980 *Whyte, C.B., 1978 o Gifted and Talented *Colson, S.; et al., 1979 *Crusey, D., 1979 *Melhus, G.E.; Hershenson, D.B.; and Vermillion, M.E., 1973 *Paul, R.H., 1977 *Public Service Administration Internship Program in Career Education, 1978 o Handicapped *Gannaway, T.W.; Sink, J.M.; and Becket, W.C., 1980 *Neely, M.A., and Kosier, M.W., 1977 o Females *Holland, J.L.; et al., 1978 *Lawler, A.C., 1979 *Motsch, P., 1980 *Prediger, D.J., and Noeth, R.J., 1979 *Thomas, H.B.; et al., 1980 o Dropouts/Potential Dropouts *Campbell, R.B., 1981

STUDIES GROUPED BY CAREER GUIDANCE POPULATIONS

Population	Studies
Secondary and Postsecondary Level Students (Continued)	o Droupouts/Potential Dropouts (Continued) *Mattison, W.H., 1979 *Schmidt, W.I., and Dykeman, B.F., 1979 *Sisco, W.M., 1980 *Sprengel, D.P., and Tomey, E.A., 1974 *Stoker, J., 1979 o Mexican-American *Bergland, B.W., and Lundquist, G.W., 1975 o Indian (Native American) *Career Guidance for Indian Youth, 1976 o Males *Aiken, J., and Johnston, J.A., 1973 *Bergland, B.W., and Lundquist, G.W., 1975 *Bergland, B.W.; Quatrano, L.A.; and Lundquist, G.W., 1975 *Hanson, J.T., and Sander. D.L., 1973 *Pilato, G.T., and Myers, R.A., 1973 o Black *Career Education Resource Center Program (CERCP), 1979 *Rolle, G.F., Sr.; et al., 1977 o Other (Students not specifically categorized as one of the above) *Blimline, C.A., 1976 *Brenner, D., and Gazda-Grace, P.A., 1979 *California State Department of Education, 1978 *Career Education: Planning, Learning, Understand, and Succeeding (CE →), 1977 *Carey, M.A., and Weber, L.J., 1979 *Cesar, J.P.; et al., 1982 *Chatham, K., 1975 *Cochran, D.J.; et al., 1977 *Cochran, J.R., and Weis, D.M., 1972 *Conecuh County Experience-based Career Education, 1977

STUDIES GROUPED BY CAREER GUIDANCE POPULATIONS

Population	Studies
Secondary and Postsecondary Level Students (Continued)	o Other (Continued) *Crawford, G., and Miskell, C., 1978 *Ducat, D.E., 1980 *The Effect of Career Awareness, 1978 *Evaluation Report for Career Education Strategies, 1975 *Evans, J.R., and Rector, A.P., 1978 *Experience-Based Career Education Project, 1982 *Flake, M.H.; Roach, A.J., Jr.; and Stenning, W.R., 1975 *Ganster, D.C., and Lovell, J.E., 1978 *Gillingham, W.H., and Lounsbury, J., 1979 *Graff, R. W.; Danish, S.; and Austin, B., 1972 *Greene, S.D., 1973 *Hamdani, A., 1977 *Handler, L.; et al., 1978 *Henderson, H., 1975 *Highline's Vocational Exploratory and Preparatory Program, 1978 *Jackson, D.J., and Egner, J.R., 1976 *Jennings, G.D.; et al., 1976 *Kent State University, 1975 *Kenyon, C.B., 1974 *Kershner, K.M., and Blair, M.W., 1975 *Leach, J.A., 1978 *Leton, D.A., 1975 *Maguire, L., 1975 *Mattison, W.H., 1979 *McCauley, L.D., and Rusling, D.E., 1979 *McClure, L., 1975 *McGowan, A.S., 1977 *Muse, I.D., and Coombs, C.G., 1977 *Muse, I.D., and Coombs, C.G., 1978 *Myers, R.R.; et al., 1975 *Neely, M.A., 1979 *Nelson, R., 1979 *Olive, P.A., 1978 *Parkway Experience-Based Career Education, 1977 *Peterson R., 1975 *Quinn, M., 1973 *Reardon, R.C.; Bonnell, R.O., Jr.; and Huddleston, M.R., 1982 *Rhode Island Department of Education, 1979 *Risser, J.J., and Tulley, J.E., 1977 *Rubinton, N., 1980

STUDIES GROUPED BY CAREER GUIDANCE POPULATIONS

Population	Studies
Secondary and Postsecondary Level Students (Continued)	o Other (Continued) *Ryan, D.W.; et al., 1980 *Sampson, J.P., Jr., and Stripling, R.O., 1979 *Sanders, J.H., and Bertram, C.L., 1973 *Schenk, G.E.; Johnston, J.A.; and Jocobsen, K., 1979 *Shively, J.E., 1975 *Shively, J.E., and Davis, C.S., 1979a *Shively, J.E., and Davis, C.S., 1979b *Smith, G., 1975 *Spotts, R., and Evenson, J., 1977 *Stead, F.L., and Hartnett, R.A., 1978 *Terranova, C., 1976 *Topougis, N., 1978 *Van Dusseldorp, R.A., 1978 *Warner, S.G., and Jepsen, D.A., 1979 *Westbrook, J.D., 1974 *Whyte, C.B., 1978 *Wiggins, J.D., and Moody, A., 1981 *Wyoming State Department of Education, 1977 *Zener, T. B., and Schnuelle, L., 1972 *Zener, T.B., and Schnuelle, L., 1976 *Zytowski, D.G., 1977
Vocational Center Trainees	*Rhode Island Department of Education, 1979 *Serednesky, G.; Cahill, 1.; and Engelhart, C.I., 1974
Inmates	*Feldman, H.S., and Marinelli, R.P., 1975 *Speas, C.M., 1979
Mixed Grade Levels	o Grades K-12 *Comer, J., 1974 o Grades 4-12 *Hanson, B., 1978

STUDIES GROUPED BY CAREER GUIDANCE POPULATIONS

Population	Studies
Mixed Grade Levels	o Grades 7, 9, 11 *Omvig, C.P., 1979 o Grades 7-14 *Hagans, R., 1975

REFERENCES

Aiken, J., and Johnston, J. A. "Promoting Career Information-Seeking Behaviors in College Students." Journal of Vocational Behavior 3, no. 1 (January 1973): 81-87.

Bergland, B. W., and Lundquist, G. W. "The Vocational Exploration Group and Minority Youth: An Experimental Outcome Study." Journal of Vocational Behavior 7 (1975): 289-296.

Bergland, B. W.; Quatrano, L. A.; and Lundquist, G. W. "Group Social Models and Structured Interaction in Teaching Decision Making." The Vocational Guidance Quarterly 24, no. 1 (September 1975): 28-36.

Blimline, C. A. "The Effect of a Vocational Unit on the Exploration of Nontraditional Career Options." Journal of Vocational Behavior 9 (1976): 209-217.

Brenner, D., and Gazda-Grace, P. A. "Career Decision Making in Women as a Function of Sex Composition of Career-Planning Groups." Measurement and Evaluation in Guidance 12, no. 1 (April 1979): 8-13.

California State Department of Education. The Effect of Career Awareness and Career Exploration Counseling on the Vocational Choices of Inner-City High School Students. Los Angeles: CSDE, March 1978. (ERIC Document Reproduction Service no. ED 162 055)

Campbell, R. B. Final Report of Project P.R.I.D.E. Mays Landing, NJ: Greater Egg Harbor Regional High School District, 1981.

Campbell, R. E.; Cellini, J. V.; Shaltry, P. E.; Long, A. E.; Pinkos, D.; and Crites, J. O. A Diagnostic Taxonomy of Adult Career Problems. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1979.

Career Education: Planning, Learning, Understanding, Succeeding (CE +). Interim Report. Bismarck: North Dakota State Board for Vocational Education, 1977. (ERIC Document Reproduction Service no. ED 150 290)

Career Education Resource Center Program (CERCP). Washington, DC: District of Columbia School System, 1979.

Career Guidance for Indian Youth. Final Report. Parker, AZ: Colorado River Indian Tribes, 30 June 1976. (ERIC Document Reproduction Service no. ED 132 366)

Carey, M. A., and Weber, L. J. "Evaluating an Experience-based Career Education Program." The Vocational Guidance Quarterly 27, no. 3 (March 1979): 216-222.

Cesari, J. P.; Winer, J. L.; Zychlinski, F.; and Laird, I. O. "Influence of Occupational Information Giving on Cognitive Complexity in Decided Versus Undecided Students." Journal of Vocational Behavior 21, no. 2 (October 1982): 224-230.

Chatham, K. EBCE Developer/Demonstrator Project. San Francisco, CA: Far West Laboratory for Educational Research and Development, 1975(?).

Cochran, D. J.; Hoffman, S. D.; Strand, K. K.; and Warren, P. M., "Effects of Client/Computer Interaction on Decision-Making Processes." Journal of Counseling Psychology 24 (1977): 308-312.

Cochran, J. R., and Weis, D. M. An Evaluation of Two Career Exploration Programs in 1970-71. Akron, OH: University of Akron, 1972. (ERIC Reproduction Service no. ED 073 310)

Colson, S.; Godsey, R.; Mayfield, B.; Nash, W. R.; and Borman, C. "Evaluating Career Education for Gifted and Talented Students." Journal of Research and Development in Education 12, no. 3 (1979): 51-62. (ERIC Reproduction Service no. ED 209 047)

Comer, J. Occupational and Career Development. Marietta, GA: Cobb County Public Schools, 1974.

Community College and Local Rural Secondary Schools Cooperative Career Assessment and Exploration Program. Final Project Report. Ankeny, IA: Des Moines Area Community College, 1975. (ERIC Reproduction Service no. ED 131 319)

Conecuh County Experience-based Career Education. Interim Report. Evergreen, AL: Conecuh County Board of Education, 1977. (ERIC Reproduction Service no. 147 527)

Crawford, G., and Miskell, C. Experience-Based Career Education at Wichita East High School: A Third Party Evaluation for Year Two, 1977-78. Wichita, KS: Wichita Public Schools, 1978. (ERIC Reproduction Service no. ED 170 576)

Crusey, C. Career Exploration for Gifted and Talented High School Students. Section II. Correspondence and Evaluation, Appendix A-G. Lakewood, CO: Jefferson County Public Schools, 1979. (ERIC Reproduction Service no. 173 614)

Drake, J. W. "Statement of Jeffrey W. Drake, Coordinator of Career Development, Genessee Intermediate School District, Flint, Michigan." Hearings on Reauthorization of the Vocational Education Act of 1963; Part 7: Vocational Guidance and Counseling and H.R. 4974 Vocational Guidance Act of 1981. Washington, DC: 1982.

Drier, H. Statement of Harry Drier on behalf of the Guidance Division, American Vocational Association. House Subcommittee on Elementary, Secondary, and Vocational Education. Washington, DC: 1982.

Ducat, D. E. "Cooperative Education, Career Exploration, and Occupational Concepts for Community College Students." Journal of Vocational Behavior 17, no. 2 (October 1980): 195-203.

The Effect of Career Awareness and Career Exploration Counseling on the Vocational Choices of Inner-City High School Students. Report on Project BITE, Business, Industry, Training, Education. Los Angeles: University of California, Division of Vocational Education, 1978. (ERIC Document Reproduction Service no. Ed 162 055)

Evaluation Report for Career Education Strategies: A Regional Process 1974-1975. Lubbock, TX: Education Service Center, Region 17, 1975. (ERIC Document Reproduction Service no. ED 130 066)

Evans, J. R., and Rector, A. P. "Evaluation of a College Course in Career Decision Making." Journal of College Student Personnel 19 (1978): 163-169.

Experience-Based Career Education. High School Level Demonstration Project. Interim Report. Second Year. (September 20, 1977 to September 30, 1978). Greenville, SC: Greenville County School District, 1978. (ERIC Document Reproduction Service no. ED 167 747).

Experience-Based Career Education Project: Ramon Power High School, Trina Padilla High School, Miguel Melendez Munoz High School. Hato Rey, PR: Department of Education, 1982.

Feldman, H. S., and Marinelli, R. P. "Career Planning for Prison Inmates." The Vocational Guidance Quarterly 23, no. 4 (June 1975): 358-362.

Flake, M. H.; Roach, A. J., Jr.; and Stenning, W. F. "Effects of Short-Term Counseling on Career Maturity of Tenth-Grade Students." Journal of Vocational Behavior 6, no. 1 (February 1975): 73-80. (ERIC Reproduction Service no. ED 113 910)

Fretz, B.F. "Evaluating the Effectiveness of Career Interventions." Journal of Counseling Psychology Monograph 28, no. 1 (January 1981): 77-87.

Gannaway, T. W.; Sink, J. M.; and Becket, W. C. "A Predictive Validity Study of a Job Sample Program with Handicapped and Disadvantaged Individuals." The Vocational Guidance Quarterly 29 (September 1980): 4-11.

Ganster, D. C., and Lovell, J. E. "An Evaluation of a Career Development Seminar Using Crites' Career Maturity Inventory." Journal of Vocational Behavior 13, no. 2 (October 1978): 172-180.

Gillingham, W. H., and Lounsbury, J. "A Description and Evaluation of a Career Exploration Course." Journal of College Student Personnel 20 (November 1979): 525-529.

Graff, R. W.; Danish, S.; and Austin, B. "Reactions to Three Kinds of Vocational Educational Counseling." Journal of Counseling Psychology 19, no. 3 (1972): 224-228. (ERIC no. EJ 058 626)

Greene, S. D. "The Relationship Between a Developing Career Education Program and the Career Maturity of Secondary School Students." Ph.D. dissertation, Kansas State University, 1973. (ERIC Document Reproduction Service no. ED 089 059)

Gysbers, N. C. "Statement of Norman C. Gysbers, Professor, Counseling and Professional Services, University of Missouri, Columbia, Missouri; Representing the American Vocational Association." Hearings on Reauthorization of the Vocational Education Act of 1963; Part 7: Vocational Guidance and Counseling and H.R. 4974 Vocational Guidance Act of 1981. Washington, DC: 1982.

Hagans, R. Education and Work Program. Portland, OR: Northwest Regional Educational Laboratory, 1975(?).

Hamdani, A. "Facilitating Vocational Development Among Disadvantaged Inner-City Adolescents." The Vocational Guidance Quarterly 26, no. 1 (September 1977): 60-68.

Handler, L.; Wiggins, M. J.; Glanville, M.; and Peters, E. L. Second-Year Evaluation of Harrisburg City School District's Experience-based Career Education Program. West Chester, PA: Educational Research and Development Association, 1978. (ERIC Docment Reproduction Service no. ED 181 170)

Hanson, B. Pima County Developmental Career Guidance Project. Tuscon, AZ: Pima County Public Schools, 1978.

Hanson, J. T., and Sander, D. L. "Differential Effects of Individual and Group Counseling on Realism of Vocational Choice." Journal of Counseling Psychology 20, no. 6 (November 1973): 541-544.

Henderson, H. Experience-Based Career Education Program. Charleston, WV: Appalachian Educational Laboratory, 1975(?).

Herr, E. L. "Statement of Edwin L. Herr." Oversight Hearing on Guidance and Counseling, U.S. Senate Subcommittee on Education, Arts, and Humanities. Washington, DC: 1982.

Herr, E. L. "The Effects of Guidance and Counseling: Three Domains." In Foundations for Policy in Guidance and Counseling, edited by E.L. Herr and N. M. Pinson. Falls Church, VA: American Personnel and Guidance Association, 1982.

Herr, E. L., and Pinson, N.M., eds. Foundations for Policy in Guidance and Counseling. Falls Church, VA: American Personnel and Guidance Association, 1982.

Highline's Vocational Exploratory and Preparatory Program. Interim Report. (Second Year, September 7, 1977-September 6, 1978). Seattle, WA: Highline Public Schools, 1978. (ERIC Document Reproduction Service no. ED 162 109)

Holland, J. L.; Magoon, M.; and Spokane, A. R. "Counseling Psychology: Career Interventions, Research, and Theory." In Annual Review of Psychology, Palo Alto, CA. Annual Reviews, Inc., 1981.

Holland, J. L.; Takai, R.; Gottfredson, G. D.; and Hanau, C. "A Multi-variate Analysis of the Effects of the Self-Directed Search on High School Girls." Journal of Counseling Psychology 25, no. 5 (1978): 384-389. (ERIC no. EJ 220 892)

Holmes, D. H. Summary Report of the Audit of an Evaluation of the Consolidated Services Demonstration Project. Springfield, VA: Research and Program Evaluation Services, 1979. (ERIC Document Reproduction Services no. ED 183 937)

Jackson, D. J., and Egner, J. R. Process Verification of a Career Counseling Program. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, California, 19-23 April 1976. (ERIC Document Reproduction Service no. ED 124 862)

Jennings, G. D.; Smith, H. D.; and Monroe, E. Career Education in the High School. Rome, GA: Georgia State Department of Education, 1976. (ERIC Document Reproduction Service no. ED 132 390)

Kent State University. Pre-Postsecondary Program Evaluation Report 1974-1975. Kent State University, OH: Bureau of Educational Research and Services, 1975. (ERIC Document Reproduction Services no. ED 120 571)

Kenyon, C. B. Alternate Learning Project. Providence, RI: Dissemination Services, 1974(?).

Kershner, K. M., and Blair, M. W. Career Education Program, 1974-1975. Final Evaluation Report. Philadelphia, PA: Research for Better Schools, 1975. (ERIC Document Reproduction Services no. ED 138 826)

Lawler, A. C. "Career Exploration with Women Using the Nonsexist Vocational Card Sort and the Self-Directed Search." Measurement and Evaluation in Guidance 12, no. 2 (July 1979): 87-97.

Leach, J. A. Methods and Materials for Teaching Occupational Survival Skills. Phase III: Influences of the Occupational Survival Skills Module on the Attainment of Skills and Attitudes Toward Employment of Selected High School Students. Urbana, IL: University of Illinois, Division of Business Education, 1978. (ERIC Document Reproduction Service no. ED 166 442)

Leton, D. A. An Evaluation of the Career Development Course Intermediate Level. Final Report. Honolulu: Hawaii State Department of Education, 1975. (ERIC Document Reproduction Service no. ED 112 307)

Maguire, L. Experience-Based Career Education. Philadelphia, PA: Research for Better Schools, 1975.

Mattison, W. H. Experience-Based Career Education. Final Report, September 14, 1976 - September 13, 1979. Tupelo, MS: Itawamba Junior College, 1979. (ERIC Document Reproduction Service no. ED 183 759)

McCauley, L. D., and Rusling, D. E. Final Report for the Intensified Career Exploration Program. New York, NY: Policy Studies in Education, 1979. (ERIC Document Reproduction Services no. ED 183 925)

McClure, L. Education and Work Program--Experience-Based Career Education. Portland, OR: Northwest Regional Educational Laboratory, 1975.

McGowan, A. S. "Vocational Maturity and Anxiety Among Vocationally Undecided and Indecisive Students: The Effectiveness of Holland's Self-Directed Search." Journal of Vocational Behavior 10 (1977): 196-204.

Melhus, G. E.; Hershenson, D. B.; and Vermillion, M. E. "Computer-Assisted Versus Traditional Vocational Counseling with High and Low Readiness Clients." Journal of Vocational Behavior 3 (1973): 137-144.

Motsch, P. "Peer Social Modeling: A Tool for Assisting Girls with Career Exploration." The Vocational Guidance Quarterly 28, no. 3 (March 1980): 231-240.

Muse, I. D., and Coombs, C. G. Experience-Based Career Education, Part D, 13. 502. Final Report, Year 2-1977-78. Ogden, UT: Weber County Board of Education, 1978. (ERIC Document Reproduction Service no. ED 164 834)

Muse, I. D., and Coombs, G. "Experience-Based Career Education, Part D, 13. 502. First Interim Report." Provo, UT: Brigham Young University, 1977. (ERIC Document Reproduction Service no. ED 147 524)

Myers, R. "Research on Educational and Vocational Guidance." In Handbook of Psychotherapy and Behavior Change: An Empirical Analysis, edited by A. B. Begin and S. L. Garfield. New York: John Wiley and Sons, Inc., 1971.

Myers, R. A.; Lindeman, R. H.; Thompson, A. S.; and Patrick, T. "Effects of Educational Career Exploration System on Vocational Maturity." Journal of Vocational Behavior 6, no. 2 (April 1975): 245-254.

National Vocational Guidance asssociation Glossary of Career Guidnce Terms. Washington, DC: National Vocational Guidance Association. Unpublished paper, March 1982.

Neely, M. A. State Fair Community College Experience-Based Career Education, 1978-1979. Third Party Evaluation Report. Manhattan: Kansas State University, Center for Extended Services, 1979. (ERIC Document Reproduction Service no. ED 181 269)

Neely, M. A., and Kosier, M. W. "Physically Impaired Students and the Vocational Exploration Group." The Vocational Guidance Quarterly 26, no. 1 (September 1977): 37-44.

Nelson, R. Experience-Based Career Education. Fond du Lac, WI: Franklin School, 1979.

Olive, P. A. Project Discovery. Red Oak, IA: Experience Education, 1978.

Oliver, L. W. "Outcome Measurement in Career Counseling Research." Journal of Counseling Psychology 26 (1979): 217-226.

Omvig, C. P. The Bowling Green, Kentucky, K-12 Career Education Incremental Improvement Project. Evaluation Report. Lexington: University of Kentucky, College of Education, 1979. (ERIC Document Reproduction Service no. ED 183 892)

Page, E. Career Education Resource Center Program. Washington, DC: Ellington School of the Arts, 1980.

Parkway Experience-Based Career Education--Annual Interim Report. First Year. October 1, 1976 to September 30, 1977. Chesterfield, MO: Parkway School District, 1977. (ERIC Document Reproduction Service no. ED 147 546)

Paul, R. H. Evaluating Career Education in the Arts. Providence, RI. New York, NY: Policy Studies in Education, 1977. (ERIC Document Reproduction Service no. ED 172 008)

Peterson, R. Experience-Based Career Education. San Francisco, CA: Far West Laboratory, 1975.

Pilato, G. T., and Myers, R. A. "Effects of Computer-Mediated Vocational Guidance Procedures: Accuracy of Self-Knowledge." Journal of Vocational Behavior 3 (1973): 167-174.

Pinson, N. The Contribution of Guidance and Counseling to the Employability of Youth. Washington, DC: National Institute of Education, 1980.

Pinson, N.; Gysbers, N.; and Drier, H. Strengthening Work-related Education and Training in the 1980s Through Improved Guidance Programs. Washington, DC: The National Guidance Association and the Guidance Division of the American Vocational Association, February 1981.

Prediger, D. J., and Noeth, R. J. "Effectiveness of a Brief Counseling Intervention in Stimulating Vocational Exploration." Journal of Vocational Behavior 14, no. 3 (June 1979): 352-368.

Public Service Administration Internship Program in Career Education. Final Report. Rockville, MD: Montgomery County Public Schools, 1978. (ERIC Document Reproduction Service no. ED 166 869)

Quinn, M. Experience-Based Career Education. Philadelphia, PA: Research for Better Schools, 1973.

Reardon, R. C.; Bonnell, R. O., Jr.; and Huddleston, M. R. "Self-Directed Career Exploration: A Comparison of CHOICES and the Self-Directed Search." Journal of Vocational Behavior 20 (1982): 22-30.

Rhode Island Department of Education. Experience-Based Career Education, Rhode Island Department of Education, Final Evaluation Report. Kingston: University of Rhode Island, Curriculum Research and Development Center, 1979. (ERIC Document Reproduction Service no. ED 189 285)

Risser, J. J., and Tulley, J. E. Pasadena City College SIGI Project. Research Study. Pasadena, CA: Pasadena City College, 1977. (ERIC Document Reproduction Service no. ED 150 446)

Rolle, G. E., Sr.; Williams, P.T.; and Johnson, J. Facilitating Career Development of Minority Students. Atlanta, GA: Southern Association of Colleges and Schools, 1977. (ERIC Document Reproduction Service no. ED 189 280)

Rubinton, N. "Instruction in Career Decision Making and Decision-Making Styles." Journal of Counseling Psychology 27 (1980): 581-588.

Ryan, C. W.; Drummond, R. J.; and Shannon, M. D. "Guidance Information System: An Analysis of Impact on School Counseling." School Counselor 28 (1980): 93-97.

Sampson, J. P., and Stripling, R. O. "Strategies for Counselor Intervention with a Computer-Assisted Career Guidance System." The Vocational Guidance Quarterly 27, no. 3 (March 1979): 230-238.

Sanders, J. H., and Bertram, C. L. Evaluation Summary 1972-73; Employer-based Career Education. Charleston, WV: Appalachian Educational Laboratory, 1973. (ERIC Document Reproduction Service no. ED 110 651)

Schenk, G. E.; Johnston, J. A.; and Jacobsen, K. "The Influence of a Career Group Experience on the Vocational Maturity of College Students." Journal of Vocational Behavior 14, no. 3 (June 1979): 284-296.

Schmidt, W. I., and Dykeman, B. F. "Testing the Effectiveness of a Career Education Program for Potential Dropouts." Education 99, no. 3 (Spring 1979): 287-290. (ERIC no. EJ 203 592)

Serednesky, G.; Cahill, L.; and Engelhart, C. I. "Effectiveness of the GATB and Counseling Combined: Reducing Vocational Training Dropout Rates." Journal of Employment Counseling 11, no. 1 (March 1974): 10-12. (ERIC no. EJ 094 334)

Shively, J. E. Internal Evaluation Report. Experience-Based Career Education. Charleston, WV: Appalachian Educational Laboratory, 1975. (ERIC Document Reproduction Service no. ED 138 817)

Shively, J. E., and Davis, C. S. Experience-Based Career Education Part D Program, Project CLETE. High Point, North Carolina. Final Evaluation Report. Charleston, WV: Appalachian Educational Laboratory, 1979a. (ERIC Document Reproduction Service no. ED 178 722)

Shively, J. E., and Davis, C. S. Final Evaluation Report for Conecuh County Experience-based Education Program. Evergreen, Alabama. Charleston, WV: Appalachian Educational Laboratory, 1979b. (ERIC Document Reproduction Service no. ED 181 222)

Sisco, W. M. Project S.A.V.E.: Alternative Education in the Rural Community. Kingman, AZ: Mojave County Career Education, 1980.

Smith, G. Public Schools of Choice. New Haven, CT: New Haven School System, 1975.

Speas, C. M. "Job-Seeking Interview Skills Training: A Comparison of Four Instructional Techniques." Journal of Counseling Psychology 26, no. 5 (1979): 405-412.

Spokane, A. R., and Oliver, L. W. "The Outcomes of Vocational Intervention" In The Handbook of Vocational Psychology, edited by S. O. Osipow and W. B. Walsh. Hillsdale, NJ: Erlbaum Associates, in press.

Spotts, R., and Evenson, J. Experience-Based Career Education. Evaluation of Outcomes at Three Pilot Programs. Berkeley, CA: Far West Laboratory for Educational Research and Development, 1977. (ERIC Document Reproduction Service no. ED 154 236)

Sprengel, D. P., and Tomey, E. A. Vocational Education in the Private Sector: Final Report and Assessment, 1972-73; Comparison of Impact of the Pilot and Experimental Years. St. Louis, MO: Center for Urban Problems, 1974. (ERIC Document Reproduction Service no. ED 143 691)

Stead, F. L., and Hartnett, R. A. A Third Party Evaluation of the Appalachian Maryland Experience-Based Career Education Project: 1977-78. Executive Summary. Morgantown: University of West Virginia, Office of Educational Research and Field Services, 1978. (ERIC Document Reproduction Service no. ED 171 902)

Stevens, J. H. "Statement of James H. Stevens, Counselor, West York Area High School, York, Pennsylvania," Hearings on Reauthorization of the Vocational Education Act of 1963; Part 7: Vocational Gudance and Counseling and H.R. 4974, Vocational Guidance Act of 1981. Washington, DC: 1982.

Stoker, J. Project H.O.L.D. (Help Overcome Learner Dropouts), An ESEA Title IV C Exemplary Project. Watsonville, CA: Pajaro Valley Unified School District, 1979.

Stump, R W. "Statement of Robert W. Stump, Educational Consultant, Arlington, Virginia." Hearings on Reauthorization of the Vocational Education Act of 1963; Part 7: Vocational Guidance and Counseling and H.R. 4974, Vocational Guidance Act of 1981. Washington, DC: 1982.

Terranova, C. "The Effectiveness of a Summer Freshmen Orientation Conference." Measurement and Evaluation in Guidance 9, no. 2 (July 1976): 70-74.

Thomas, H. B., Christie, L.; Calvin, K.; and Denbroeder, K. Impact of an Educational Program Designed to Assist Women Overcome the Deterrents to Entering Nontraditional Occupations. Tallahassee: Florida State University, 1980. (ERIC Document Reproduction Service no. ED 186 636)

Topougis, N. Career Development Program. Akron, OH: Career Education Programs, 1978.

U. S. Department of Health, Education, and Welfare. National Advisory Council on Supplementary Center and Services. Innovative Educational Practice. Washington. Washington, DC: George Washington University, 1974.

U. S. Office of Education. Educational Programs That Work. San Francisco, CA: Far West Laboratory for Educational Research and Development, 1975.

Van Dusseldorp, R. A. Experience-Based Career Education Project Administered by Iowa Central Community College, Fort Dodge, Iowa. Fort Dodge, IA: Iowa Central Community College, 1978. (ERIC Document Reproduction Service no. ED 164 818)

Warner, S. G., and Jepsen, D. A. "Differential Effects of Conceptual Level and Group Counseling Format on Adolescent Career Decision-Making Processes." Journal of Counseling Psychology 26 (1979): 497-503.

Westbrook, F. D. "A Comparison of Three Methods of Group Vocational Counseling." Journal of Counseling Psychology 21, no. 6 (1974): 502-506.

Whyte, C. B. "Effective Counseling Methods for High-Risk College Freshmen." Measurement and Evaluation in Guidance 10, no. 4 (January 1978): 198-200.

Wiggins, J. D., and Moody, A. "A Field-Based Comparison of Four Career-Exploration Approaches." The Vocational Guidance Quarterly 30, no. 1 (September 1981): 15-20.

Wyoming State Department of Education. Planning for Change through Career Education. Interim Report. Laramie: University of Wyoming, College of Education, 1977. (ERIC Document Service Reproduction no. ED 149 129)

Zener, T. B., and Schnuelle, L. An Evaluation of the Self-Directed Search: A Guide to Educational and Vocational Planning. Baltimore, MD: Center for the Study of Social Organization of Schools, Johns Hopkins University, 1972. (ERIC Document Reproduction Service no. ED 061 458)

Zener, T. B., and Schnuelle, L. "Effects of the Self-Directed Search on High School Students." Journal of Counseling Psychology 23 (1976): 353-359.

Zytowski, D. G. "The Effects of Being Interest-Inventoried." Journal of Vocational Behavior 11, no. 2 (October 1977): 153-157.